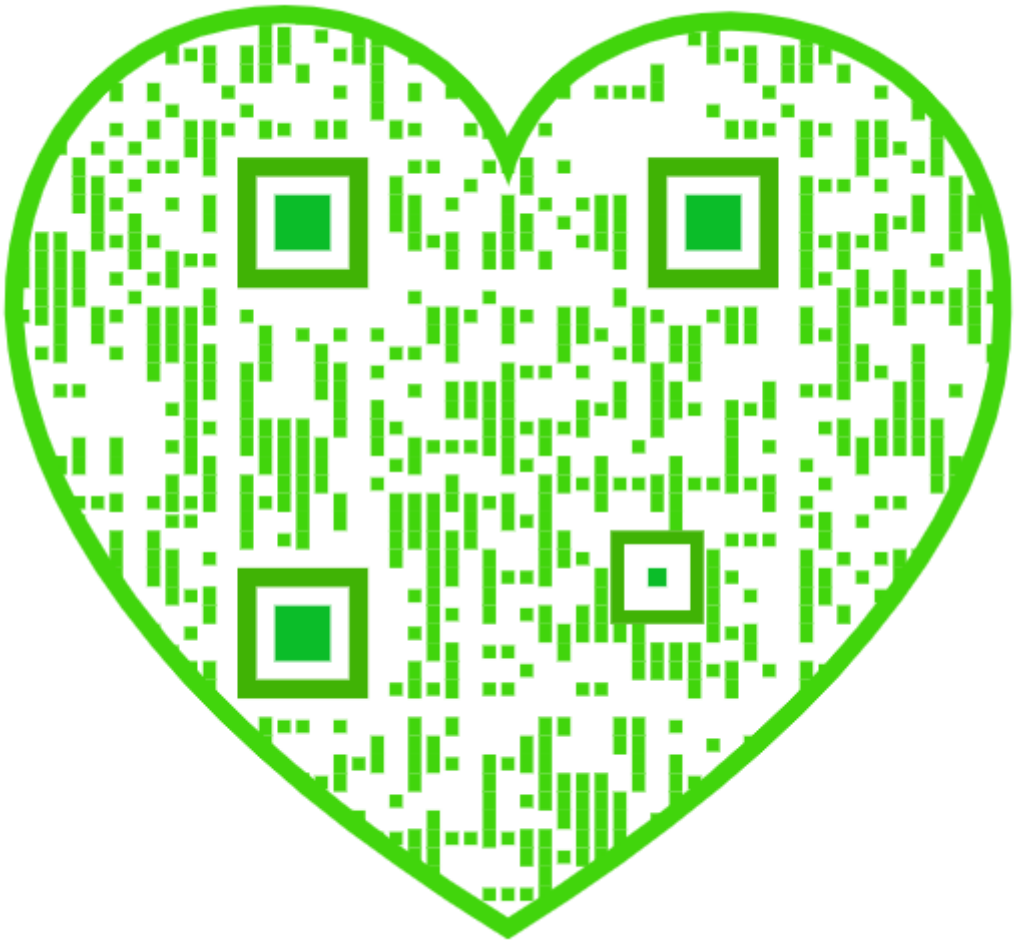
UMASS/AMHERST
312066 0333 3301 8



LIBRARY
OF THE

MASSACHUSETTS
AGRICULTURAL
COLLEGE

SOURCE

THE

British Bee Journal,

AND BEE-KEEPERS' ADVISER.

EDITED BY

THOS. WM. COWAN F.G.S., F.L.S., F.R.M.S., &c., AND W. BROUGHTON CARR.

VOLUME XXXIII.

JANUARY–DECEMBER, 1905.

PUBLISHED BY

SIMPKIN, MARSHALL, HAMILTON, KENT, & Co., LIMITED,

23, PATERNOSTER ROW, E.C.

LIBRARY
UNIVERSITY OF
MASSACHUSETTS
AMHERST, MASS.

LONDON :

PRINTED BY LOVE AND MALCOMSON, LIMITED,

4 AND 5, DEAN STREET, HIGH HOLBORN, W.C.

INDEX.

EDITORIAL NOTICES:—
American Enterprise in the Interest of Apiculture, 241
Anonymous Contributors, 171
Bee-keeping Statistics Report of the D.T.I. for Ireland, 1904, 81
Bee-keeping as an Occupation, 451, 471
"Bee Pest" Bill, The, 141
Bee Season and Coming Shows, The, 271
British B.K.A. Conference of Bee-keepers, 411, 421; Conference of County Representatives, 401; Examinations for Second-class Certificates, 431; Monthly Meeting of Council, 461; Conversazione, 121, 131, 142, 151
Changes in the Government, 121
Cheap Scotch (?) Honey, 81
"Clanstral" Ventilated Hive and Detention System, The, 71, 121, 131, 301
Closing Show Season, 341
Cumberland B.K.A.: That Vote of Censure, 171
Dairy Show, The, 414
Dr. Dzierzon's Birthday, 41
"Finest Scotch Honey"—Tons on Offer in London, 51, 61
Foul Brood Legislation, 11, 221; Decision of the Board of Agriculture, 231
Important Notice — Removal of B.B.J. and Record Offices, 231
Irish Bee-keepers' Association, 11, 21, 31, 42
Judging Honey, Standard Samples Wanted, 431
Mr. Cowan's Tour in America, 141, 191
Milan International Exhibition, 501
Perthshire B.K.A., Annual Meeting, 441
Profitable Bee-keeping Without Cost, 321
Queen Rearing in America, 92
Return of Mr. and Mrs. Cowan, 471
Reviews, 61, 101, 128, 137, 171, 302, 407
Royal Show at Park Royal, 151, 181, 191
St. Louis Exhibition, 11
Testing Purity of Bees-wax, 91
Volume Thirty-three, 1
Weather, The, 211

NOTES BY THE WAY. By W. Woodley, Beedon, Newbury:—
Apis Mellifica, 231
Bacillus Alvei, 93
Bees and Hazel Catkins, 74; Making Steady Progress, 211
Creosote, Use of, 293
Buying Swarms, 501
Feeding Bees, 134
Honey Jars, 403; Season, Closing of, 292
Introducing Queens, 134
Insect Pests in Sections, 481
Metal End Required, A Medium, 272
Planning for the Coming Season, 14
Price of Honey, 354
Queen Wasps, 192
Railway Companies and Claims for Damage, 134, 481, 501
Requeening, 272; for Winter, 354
Scotch (?) Honey, 74
Size of Sections, 35, 441
Spreading Brood, 192
Square v. Tall Sections, 462
Swallows and Bees, 403
Swarming Time, 252
Swarms, 174; Buying Swarms, 501
"Swarthmore" System, The, 154
Watering Troughs, 74
Wax-moth, 312
Work for New Year, 14
,, February, 52
,, March, 93, 113

AMONG THE BEES: By D. M. M., Banff:—
Advance Apiculture, 126
Alternations, 362
Andrenæ, 183
Are Prices Falling? 102
"As Others See Us," 103
Autumn, Outside Observations in, 415
Banning Black Bees, 23
Bee Clubs, 4; Calendar, An Old-time, 491; Hives, A Novelty In, 201; Paralysis, 263; Proof Thread, 52; Statistics, 63; The Best, 303, 323
Carbolic Cloths, 284
Celluloid for Bee-keepers' Use, 62
Clearing Supers, 393
Clanstral Chamber, 491
Cooler Crates, 283
Dealing with Vicious Bees, 511
Driven Bees, 284
Drones, 82
Entrances, Hive, 201, 202
Fertile Workers, 4
Feeding Bees in Skeps, 491
"Finest Scotch Honey (?)": A Protest, 62
Foul Brood Leaflet, 182; Legislation, 222
Foul Broody Stocks, Dealing with, 342
Frame Clamps, 62; Spaces, 4
Frames and Hive Body, 202
Frames, Fixing Foundation in, 303
Getting Bees into Supers, 262
Government Blessing Apiculture, 472
Grading Honey, 4
Heather Harvest, The, 392
Honey, 43; Brick, 363; and Prices, 392
Honey Imports, 126
Introducing Queens, 3, 44, 126, 182, 303
Irish Statistics, 126
Isolated Diseased Cells, 4
Judging Heather Honey, 472
Location, 472
Looking Back; or a Hundred Years Ago, 145
Lower Chamber, The 202
Mating Queens, 393
"Missing Link" to Success, The, 222
Mysteriously Disappeared, 392
Not Proven, 362
Olla Podrida, 44
Paper Hives, 263
Pollen Feeding, 62
Queens Ceasing Laying, 431
Robbing, 372
Rosemary, 44
Scenting, 43
Scent in Bees, 491
Season, The Honey, 362
Season, The Passing, 283
Section, Which is the Best? 302
Separators, 183
Shade Boards, 4
Side Entrances, 202
Some Bad Bee Seasons, 103
Spring: How are Stores? 125
Standard Frame, 472; Standard Section, 472; Whittling Down the, 164
Strong Colonies, 263
Square Cells, 62
Swarm, A 20 lb., 363
Swarming, How to Check, 241
Tanging Bees, 451
"The Baby Soul of Singing," 183
Two Honey Recipes, 183
Uniting, 471
Volume Thirty-two, 126
Well-ripened Honey, 491
Working for Comb and Extracted, 362

EXTRACTS AND COMMENTS, from American and Colonial Bee Papers, by D. M. M., Banff: 255, 295, 385, 424, 463, 504

Abeilles, Trésor des Montagnes, 61
Africa (South), A Note from, 503; Oranges, Carrots, and Bees, 503
An Apicultural Alphabet, 509
Analysis of Honey, 116
Antipodes, At the, 386
Ants into Woods, Introducing Colonies of, 9; In Hives 257
Apiaries, Locating Large, 459
Apiary, A Government, 424; Hybridising, An, 96, 107; Visit to a Dutch, 376; Wanted a National Experimental, 184
Apis Dorsata, 341
Appeal by Mr. T. J. Weston, 16
"A Re-start with Bees," 406, 502
Are Prices Falling? 102
Artificial Swarms, Making, 507
Associations (County), A Suggestion for, 39
Autumn, Are Queens Mated in? 369; Outside Observation in, 415

Bee and Honey Shows: Berks B.K.A. at Reading, 372; Bishops Stortford B.K.A., 342; Bramhall, 361; Cambs and Isle of Ely B.K.A., 382; Cheshire Agricultural Society at Chester, 361; Confectioners' and Allied Trades at Agricultural Hall, 351; County of Anglesey B.K.A., 383; Dairy Farmers' Exhibition at Agricultural Hall, 402, 414; Derbyshire B.K.A. at Derby, 353; Devon B.K.A. at Plymouth, 461; Essex Agricultural Society at Southend, 251; Glamorgan B.K.A. at Cardiff, 301; Grocers' and Kindred Trades at Agricultural Hall, 371; Hants B.K.A. (Swanmore Branch), 311; Henbury District B.K.A., 352; Hereford Honey Fair, 361; Kent Honey Show at Wye, 391; Lancashire B.K.A. at Chorley, 341; Lancashire Agricultural Society at Lancaster, 372; Leicestershire B.K.A., 331; Lincs. B.K.A. at Grantham, 282; North Norfolk B.K.A. at Melton Constable, 321; Northants B.K.A. at Kingsthorpe, 291; Notts B.K.A. at Southwell, 292; Royal Agricultural Society at Park Royal, 151, 261; Royal Lancs. Agricultural Society at Liverpool, 311; South of Scotland B.K.A. at Dumfries, 391; Shropshire B.K.A. at Newport, 301; Staffs. B.K.A. at Shrewsbury, 341; at Walsall, 331; Surrey B.K.A. at Crystal Palace, 381; Worcestershire B.K.A., 332; Yetminster B.K.A., 332
Baby Nuclei, 61, 99; Queen-mating in, 175
Ballot of Bee-keepers, 15
Bee and Honey Shows, Exhibits at, 453
Bee-Appliances, Borrowing, 294; Guaranteeing, 438
Bee-Books, English and American, 255
Bee Calendar, An Old, 491
Bee Candy, Making, 508 Making Soft, 363, 457, 464 503; on the Show Bench, 394
Bee Club, A Village, 4, 374
Bee Culture, and the Press, 305
Bee District, An Ideal, 489: Walthamstow as a, 509
Bee Driving Experiences, 20, 417
Bee Enemies, 75, 325, 369; in South Africa, 405
Bee Experiences, Some, 396
Bee Farm, Starting a, 267
Bee Food, Foreign Honey as, 27; Sugar for, 327, 338; Honey as, 99, 100
Bee Forage, 297, 317, 379; Buckwheat as, 46; Gorse as, 489; Spraying, 178, 196; Planting for, 489; White Sage as, 315
Bee for this Country, the best, 344, 498
Bee Hive, A Novel, 234, 361; an Improved, 492
Bee House, An Old-Time, 254 or Workshop, 244
Bee, In Praise of the, 378; Insurance, 332, 345
Bee-Keeper, Notes by a "Homeless," 512
BEE-KEEPERS' ASSOCIATIONS:—
British, 1, 31, 71, 91, 101, 111, 121, 131, 142, 151, 161, 201, 251, 291, 381, 401, 411, 421, 431, 461 511; Cambs. and Isle of Ely, 89, 152; Cheshire, 143 Cumberland, 133, 144; Derbyshire, 51; Devon, 41; Essex and Suffolk, 144; Glamorgan, 153 301; Hunts, 39; Lancashire, 129; Leicestershire, 133; Lincolnshire, 112, 134; North Norfolk, 113; Northumberland and Durham, 162; North West Durham, 82; Notts, 81; Oxfordshire, 161; Perthshire 441; Shropshire, 173; Surrey, 191; Warwickshire, 162; Worcestershire, 41

Pee-keepers and Voting Papers, 17 ; A Request for the Views of 6, ; Association for South Africa, 385 ; Celluloid for, 62, 74, 87, 96, 107, 114 : Comparing Notes with, 458 ; Experience, A Lady, 243 ; Queries, A Lady, 369 ; Troubles, A, 25
Bee-keeping, Adaptability for, 408; Advising Beginners in, 69; as an occupation, 68, 286, 324, 343, 368, 451, 471, 487, 497 ; for Clergymen, 169; in Canada, 449; in California, 178 ; in India, 19 ; in Ireland, 81 ; in Jamaica, 30 ; in New Zealand, 232, 429, 434 ; in Schools, Teaching, 285 ; in Suburbs of London, 429 ; Moot Points in 385 ; Profits of, 474 ; Sisters, Our, 295 ; Starting, 198, 389, 409
Bee Lore, Ancient, 67
Bee Note from Argyllshire, A,, 436 ; from Austria, 87 ; from Gloucestershire, 8
Bee Notes, A Beginners, 65, 334 ; from Cumberland, 136, 223 ; from Derbyshire, 114, 273 ; from Essex, 364 ; from Mid - Lothian, 426 ; from Northumberland, 94 ; from Ross-shire, 104, 265 ; from the Midlands, 335 ; from the North, 154 ; from Yorkshire, 86 ; Sundry, 106
Bee Pacifiers, 266
Bee Paralysis, 263
Bee Parasites, 369
Bee-proof Thread, 62
Bee Race, Foul Brood and the, 203
Bee Season in Herts, The, 393 ; in Notts, The, 396 ; in Oxon, The, 405, 504 ; Notes on my First, 326 ; Some bad, 103
Bees and I their Enemies, 514
Bees: Stings, Effects of, 327; The Best, 323, 344 ; A Good Start with, 358, 396 ; and Chemicals, 233 ; and Church Bells, 107 ; and Dry Weather in Yorks, 304 ; and Foul Brood, 212 ; and Hazel Catkins, 29, 50, 56, 64, 74, 76, 87 ; and Lime Trees, 432 ; and Non-Technical Papers, 436 ; and Philosophy, 196, 204, 211 ; Compulsory Removal of, 238 ; as Honey Carriers, 345 ; at the Heather, 86, 365
Bees Building Comb in Candy-Box, 149 ; Building Combs Across Frames, 9 ; Building Square Cells, 56 ; Building up Stocks from Driven, 316 ; Buying, 498 ; Buying Driven, 242
Bees Carrying down Contents of Sections, 347 ; Caucasian, 468 ; Cast out of Hives, Immature, 187, 274, 275 ; Controlling, 479 ; Dealing with Vicious, 359
Bees Deserting Hive, 110 ; Through Waxmoth, 378 ; in Spring, 176
Bees Deserting Queens, 257
Bees Destroying Queen Cells, 346
Bees, Driven, 284
Bees, Dying, 158, 399
Bees, Enemies of, 60, 75, 138, 335, 374, 405, 437, 448, 514
Bees, Experiences with, 313, 476
Bees Failing to Seal Brood-Cells, 358 ; Failing to Transfer Themselves, 369
Bees Fighting among Themselves, 328 ; fighting in December, 516
Bees for Transit by Rail, Packing, 39
Bees, from Supers, Clearing, 347
Bees Found Dead in February, 70 ; in March, 109, 120 ; in Comb, 187
Bees Found in Garden Ground, 327
Bees, Garden Flowers for, 36
Bees, Handling, 498
Bees, Artificial Pollen for, 45
Bees in a Lard Pail, Feeding, 388
Bees in Cold Situations, 206 214
Bees in Greenhouse, Keeping, 399
Bees in House Roof, 315, 408
Bees in Lancashire, 234 ; in Northants, 335 ; in Notts, 356 ; in Yorkshire, 324, 344
Bees in Roof-turret, Keeping, 48
Bees in Skeps, Feeding, 428
Bees in South Africa, 384, 503
Bees in Suburban Gardens, 119, 448
Bees in "Wells" Hives, 49, 188
Bees in Winter, Confining, 417 ; Moving, 39
Bees, Italian, 446
Bees Killing Queen, 258
Bees, Longevity of, 206, 214
Bees, Making Syrup for, 10, 99
Bees, Moving, 10, 39, 40
Bees near London, Keeping, 258
Bees not Entering Supers, 316 ; Not Working Well, 297
Bees, Odds and Ends About, 224, 244, 273
Bees, Proper Times to Handle, 227
Bees, Refusing to Enter Sections, 285, 304, 326 ; Refusing to Unite, 366, 397, 426
Bees Removing Eggs from Queen Cells, 248
Bees Re-queening Themselves, 257
Bees, Reviving Moribund, 425
Bees, Robbing, 387
Bees, Scent in, 491
Bees, Selling, 187
Bees, Seventy-one Years Among the, 483
Bees Short of Stores, 49
Bees Swarming after Dividing for Increase, 258 ; Swarming when Examining Hive, 247
Bees, The Music of the, 59
Bees Vicious, 440 ; Dealing with, 511 ; Water for, 66
Bees, Wintering Badly, 138
Beeswax, Testing Purity of 94
Beginner's Difficulties, A, 89, 139, 263 ; Helping, 367, 377 ; Queries, 129, 158, 259, 268 ; Report, 48
"Black Brood," Curing, 469
Bottom Starters, 386
Brace Combs in Sections, 276
Brick Honey, 363
British Bee Goods in South Africa, 232
Brood Combs, Care of, 96, 107, 108, 127 146 ; Renewing, 276
Brood in Hives, Effects of Cold Nights on, 197
Brood in Sections, 286
Brood-nest, Working Surplus Chambers Beyond, 218
Brood, Spreading, 192
Buying and Selling Honey, 504
Buying Land Through Societies, 49, 60 ; Swarms, 477, 486, 503 ; and Selling Honey, 504

Canada, Bee-keeping in, 449
Candy Cakes, Renewing, 450
Candy Making, 58, 129, 164, 474, 489, 503, 508, 516
Carbolic Cloths, 248, 266, 284
Case, a Hard—Loss of Bees, 206
Celluloid for Bee-keepers' Use, 62, 74, 87, 96, 104, 107, 114 ; Inflammability of, 94
Central Africa, An Experience in, 474
Chapman Honey Plant, 47, 169
Chickens Hatched by Bees, 440
Christmas Greetings, 507
Cleaning Hives ; Limiting Swarming, 79
"Claustral," Ventilated Hive and Detention System, 71, 83, 224, 265, 491, 509 ; Improving the Detention Chamber, 224
Cleaning Old Frames, 99
Cleaning Supers, 314
Colonies, Increasing Our, while Controlling Swarming, 264, 273
Comb-building in Spring, 89
Comb Foundation, Dispensing with, 387
Combs, Beginners and Cross-Built, 388 ; Broodless in October, 398 ; Care of Brood, 96, 107, 146 ; Cross-build, 237, 305, 347; Mouldy, 108 ; Pollen-clogged, 138,158, 224, 449 ; How to Clean Them, 147
Contributors, Anonymous, 171
Cornish Bee-keeper, Notes from A., 484
"Cowan" Extractor, The, 487
Crates, Cooler, 283
Cumberland, Bee Notes from, 136, 149, 223

Dead Bees Cast Out, 50, 207
Dealing with Foul Brood, 387 ; Suspected Stocks, 427
Dead Queen Cast Out, 19, 50
Derbyshire, Notes from, 365
Detention Chamber, An Improvised, 127 ; The "Claustral" Improved, 224
Disease, Checking, 388
Dividing for Increase, 257
Drinking Troughs, 106
Driven Bees, Buying, 242 ; Feeding up, 409
Drone-Breeders, Deposing, 424
Drone-Breeding Queens, 120, 140, 187
Drone Comb, Preventing, 269
Drones, 82, 146 ; Cast Out in May, 227
Duels between Queen-Bees, 379, 394
Duplicate, Showing, 345 ; Eggs in Comb, 179, 217

Early Swarms and Capacity of Skeps, 314
Earwigs Emptying Supers, 367, 375, 385
Echoes from the Hives, 48, 59, 69, 78, 119, 150, 159, 169, 189, 198, 203, 219, 227, 239, 248, 259, 266, 278, 287, 318 368, 389, 400, 418, 439
"Ekes" below Frames, Using, 439
Elementary Queries, 317, 338
Entrances, Size of, 509
Enemies of Bees :—
Bats, 60, 75 ; Braula Coeca, 138 ; Earwigs, 367, 375, 385 ; Hedgehogs, 75 ; House Martins, 316, 365, 374, 385 ; in South Africa, 335, 365 ; Swallows and Sparrows, 384, 397, 403, 427, 434, 448 ; Tits, 75 ; Toads, 75.
Eucalyptus Oil, 253
Exhibits Damaged in Transit, 274
Experience, A January, 28, 37
Experiences, Helpful—Getting Sections Finished Off, 67 ; Some Suggestive, 24
Expert Opinion, 386
Experts and Foul Brood, 63, 76, 444
Explanation, An, 136
Extractor, The Cowan, 487
Extracting Wax from Old Combs, 479
Extractor for General Use of Associations, 328

Feeding Bees, 120, 134, 158, 388, 428, 491
Feeders, Home-made, 140 ; Simple Nucleus, 246
Feeding, Good Results from Late, 478
Fermenting Honey as Bee Food, 79
Fertile Workers, 4
Fire at Mr. E. H. Taylor's Hive Works, Welwyn, 179, 189
Flashlight for Scaring Birds, 437
Flowers for Bees, 36, 76
Formalin and Foul Brood, 484, 497
Foul Brood and the Bee Race, 177, 183, 203, 204, 212, 223 ; A Last Line on, 234 ; and Disinfection, 500 ; Bees Immune from, 213
Foul Brood Bill, The, 6, 14, 15, 36, 141, 148
Foul Brood, Clearing out, 48 ; Controversy, The, 16 ; Curing, 25, 211 ; Dealing with, 98, 104, 218, 247, 296, 317, 387 ; Eradication of, 184 ; Kill to Cure, 255 ; Leaflet, 48, 182
Foul Brood Legislation : Letters on the Subject from C. B. Bartlett, Witney, 36 ; County Councillor, Dumfries, 16 ; H. Edwards, Sunningdale, 16 ; Fairplay, Westminster, 17 ; W. H. Harris, Hayes End, 15, 94 ; R. F. Holterman, Canada, 44 ; E. P. Hinde, Liverpool, 136 ; J. B. Lamb, St. Albans, 15 ; C. J. Mapey, Cambridge, 14 ; D. M. Macdonald, Banff, 222 ; Wm. Munro, Chepstow, 17 ; J. N. Langwathby, 149 ; P. H. Pugh, Mold, 7 ; W. Patchett, Cabourne, Lincs, 16 ; E. Piddock. Alsager, 17 ; Lancelot Quayle, Isle of Man, 47 ; Allan Sharp, Brampton, 7 ; Osborn Smith, Westminster, 15 ; J. W. Swabey, Bracebridge, 8 ; H. J. O. Walker, Budleigh, Salterton, 6 ; T. I. Weston, Winchfield, 6, 148 ; Bee-Pest, 94
Foul Brood—Why has it not extinguished Bees? 177, 183, 204, 223 ; Nomenclature, 103 ; Queries, 247 ; Questions, Notes on, 103 ; Unfounded Alarm as to, 246
Foul-Broody Stocks, Dealing with, 342
Foundation, 98 ; in Frames, Fixing, 285, 303, 304, 403 ; Old and New, 255 ; Waxing, 273
Four Swarms Uniting, 333
Frames after Extracting, Cleaning up, 437 ; Cleaning, 158 ; etc., Some Notes on, 27 ; Spacing with W.B.C. Ends, 508 ; Wide Top-Bars to, 87 ; Wiring, 385
Fruit Trees, Suspected Disease in, 90

German Apiarists and Sugar Tax, 60
"Glassing" Tall Sections, 447
Gloucestershire, Notes from, 56
Good Advice, Discarding, 364
Grading Honey, 4
Granulation of Honey, 198, 339

Heather Failures, 359
Heather Honey 8; and its Blends, 482, 502; Best Location for, 70; Extracting, 379; Judging, 482.
Heather near Salisbury, 326
Heather Prospects, 335, 365
Heather, Sending Bees to the, 86, 365, 439
Herefordshire, The Season in, 383
High Rates and Owner's Risks, 513
Hints, Some Useful, 3, 182
Hive Blown Over in Storm, 90; My Glass-sided, 53; Observatory, 128, 254, 367; Roofs, 224, 494; Stands, Tripod, 252.
Hives, by Rail, Sending, 377; Disinfecting, 129; Distance Between, 207; for given Space, Number of, 218; Leaky, 488; Locating, 9, 389; Paper 263; Removing Useless Combs from, 186; Re-queening, 438; Hiving Bees on Old Combs, 207
Home-made Feeders, 140
Honey, A Japanese Jar of, 59; Air Bubbles in, 348; Analysis of, 116; and Increase, 424; and Infection, 253; Aroma and Consistency of, 207; as Bee Candy, Using as Beefood, 39; Biscuits, 424; British v. Foreign, 436; Combine, A, 255; Cure, A, 336; Dark-coloured, 307; Early, 253; from Diseased Stocks as Bee Food 187; from Non-Swarming Hives, Removing, 346; from the Giant Thistle, 349; How to Find a Market for, 406
Honey, Heather, Blends of, 516
Honey, Indian, 217; Italian, 409; in Tins by Rail, Sending, 459; Jars, 403; Jars, Buying Glass, 416; Jars, Cheap, 364; Jars, Cracked, 28, 385; Market, The, 285, 294, 303; Misnaming, 96; New Zealand, 425; Not Granulating, 478; Perils, Imported, 27; Price of, 127, 147, 167, 325, 354, 356, 392, 416, 467, 468; Recipes, Two, 183; Ripe Extracted, 336; Season, The passing, 283; Shows, Exhibiting at, 366; Some Facts About, 80; Store, A Living, 70; Sale o , 406, 416, 427, 436, 467, 504; The Need for Ripening, 306; Tins, 219; Flowers—Growing for Educational Purposes, 66; Id. per Pound, 256
Honey Imports, 29, 61, 101, 151, 181, 231, 288, 321, 362, 403, 451, 491
Honey Samples for New Zealand, 503
Honey, Samples of Unmixed, 514
House Martins and Bees, 316, 365, 385
How to Increase our Stocks while Controlling Swarming, 202
Hybrid Bees, Diverse Markings of, 408

Incident, Swarming, 243
Infection, Dangers of, 120
Insect in Comb-cappings, Unknown, 337
Insect Nomenclature, 40, 360
Insect Pests in Sections, 473, 493
Insurance for Beekeepers, 129, 335
Irish Statistics, 12
Italian Bees, 446; Honey, 409; Queens in Black Colony, 325
Japanese Jar of Honey, 59
Judges and Heather Honey, 426
Judging Heather Honey, 482; Sections, 508

Lancashire, Bees in, 234
Land Buying, Help in, 96
Large Frames and Tall Sections, 28
Leading the Way, 355
Leaky Roofs, 233, 273; Hives, 488
Legislation, For and Against, 47
Lincolnshire, A Bad Season in, 367
Locating Hives which have Swarmed, 356
Location for Hives, 9, 389
Looking Back: or A Hundred Years Ago, 145

Making Roofs Watertight, 479
Making Queens, 345, 393
Market for Honey, How to Find a, 406
Market, The Honey, 285, 294, 303
Moving Bees, 10, 39, 40; Short Distances, 127, 169; Driven Swarm, 128
Mr. Cowan in America, 193

Nature Study, 273
Newman, Accident to the Rev. H., 457
Newmarket, Notes from, 127, 156, 204
New Year, Work for, 14
New Zealand, Beekeeping in, 232; Queen Bumble Bees Wanted for Export to, 466; Honey Samples for, 503
Non-swarming Hives, 40
Notes and Comments, Passing, 326
Notes and Experiences of 1904, 26, 38
Notes by a "Homeless" Bee-Keeper, 512
Non-swarming System, Rymer's, 216
Notes for Bee-keepers, 252
Novelties for 1905: Lees' "Monks' Acre" Uncapping Tray and Extractor, 288; Taylor's Pipe-smoker for Bees, 298
Nuclei, Forming, 229
Nucleus Feeder, 246
Nucleus Hives, Small Frames for, 397

Obituary: Mr. Chas. T. Abbott, 392, 414; Mr. S. J. Baldwin, 19, 34; The Hon. & Rev. Henry Bligh, 91, 105; Mr. John H. Howard, 5; Mr. W. H. Idiens, 168
Observatory-Hive Incident, An 254
Observatory Hives to Show, Sending, 128
Observatory Hive, A Unique, 367; Stocking an, 26
Operating Room for Queen-rearing, 157
Opposition to Legislation, 6, 17
Owners' Risk Rates, 29, 98, 116, 496, 501

Parthenogenesis, The Law of, 169
Philosophy and Bees, 190, 204, 211
Planning for the Coming Season, 14
Poisons, Sale of, 94
Pollen, Artificial, 45; Feeding, 62; Mites, 108
Prices of Honey, 127, 147, 167, 325, 354, 356, 392, 416, 467, 468
Profitable Bee-keeping without Cost, 321
Profits of Bee-keeping, 474
Protecting Hives from Strong Winds, 186; Store-Combs from Moths, 327

Queen Bee: The Metamorphoses, 296; Daubed with Paint, 456; for South Africa, 159
Queen Cells and Queen Rearing, 478; in Sections, 306; Removing, 307
Queen: Cast Out, 139, 178, 275; Ceasing to Lay, 437; Deposing, 338; Fertilisation of, 198; Flights in Spring, 186; Humble Bees, — , 493; Killed and Cast Out, 275, 277, 294; Killed in September, 378; Killed when Supering, 197; Lost after Examining Hive, 268; Lost in Spring, 156, 228
Queen-mating: An Uncommon Incident, 254; and Foul Brood, 398; in Autumn, 369; in "Baby Nuclei," 174, 345; in September, 358; Mishaps in, 357
Queen-rearing, 193, 248; in America, 92; in England, 128; The "Swarthmore" Method, 135
Queen Taking Flight from Comb, 418
Queen Vagaries, 449
Queen Wasps, 192
Queenlessness, Suspected, 359, 418, 460; in May, 197
Queens: About, 336; Age of Imported, — , 188; and Increase, Raising, — , 377, 404, 452; Ceasing Laying, — , 431, 437, 448; Clipping, 248; Duplicating Eggs in Cells, 179, 217; Finding, 336, 373; Introducing, 3, 44, 126, 134, 297, 303, 182; Loss of, 156, 167, 228, 268; "Piping," 367, 376; Price of, 224; Raised from Eggs of Fertile Workers, 207; Should we Supersede our? 293; Unmated, 378
Queries, Beginners' and Elementary, 89, 237, 389, 398, 419, 428, 438, 490

Racks for Sections and Shallow Frames, 466
Railway Companies and Claims for Damage, 134
Railway Rates and Owners' Risk, 29, 98, 116, 496, 501, 511
Rainfall, February, 109; March, 138; April, 178; May, 226; June, 266; July, 315; August, 356; September, 389; October, 450; November, 490
Recipe for Candy, Brother Columbus, 464; for Honey, 183
Removing Bees from Houses, 447; from Roof, 393; from Trees, 388
Report, Beginners', 444
Re-start with Bees, 26, 406, 502
Re queening, 272
Re-queening Stocks, 129, 178, 227
Reviews, 61, 101, 137, 171, 302, 407
Reviews of Foreign Journals, by "Nemo," 56, 87, 117, 162, 181, 221
Rheumatism, Bee-stings for, 106
Robber Bees Cast Out, 227
Robbing, 372; How I Stopped It, 333; Preventing, 316; Suspected, 79, 348
Roofs, Leaky, 233, 246, 273; Making Watertight, 479
Ross-shire, Bee Notes from, 27, 265, 443
Rosemary, 44
"Rymer" Honey-bound and Queen-Excluder, The, 459; Non-Swarming System, 216

Salisbury as a Heather District, 317
Scotch (?) Honey, 74, 75
Scotland, A May Swarm in, 194
Scouting, 43
Season in Kent, The, 333; in Oxon, 504; in Surrey, 325
Section Nuclei, 473
Sections, Dealing with Unfinished, 67, 316
Sections, Judging Heather, 508; Size of, 446, 473; Tall *v.* Square, 332, 442, 456, 462, 513; Those Tall, 463
Selling Honey, 448, 454, 504
Separators, 183
Shallow Frames after Extracting, Returning, 328; Using Excluders Below, 306; Wide Ends for, 187
"Shook Swarming," 295
Sibbald Method, The, 256
Smoker Fuel, 385
Smoke v. Carbolised Cloth for Removing Sections, 248
South Africa, British Bee-Goods in, 232, 354; Bees in, 384, 503; Observatory Hives for Exhibiting in, 287
South Wales, Notes from, 166
Sparrows and Bees, 247, 273, 274
Spiders inside Hives, 100
Spray Diffuser, a Perfect, 194
Spraying Bee-Forage, 178, 196; Charlock, 224
Spring, Adding Frames of Foundation in 169; Bees Deserting Hives in, 176; Breeding, A Novices' Queries on, 58; Building Up Weak Stocks in, 58; Examination, The, 193; Flowering Bulbs in, 37; How are Stores? 125; Queen Flights in, 186; Requeening Weak Stocks in, 138
Standard Frame, Measurement of, 49
Starting Bee-keeping, 198, 389, 406, 409, 502
Stimulating in Spring; Removing Surplus Stores, 149
St. Louis Exhibition, 11
Stocking Observatory Hive, 26
Stocks, Dealing with Suspected, 407, 427; Found Queenless After Swarming, 348; From Driven Bees, Building up, 349; How to Increase while Controlling Swarming, 214, 238; Increasing, 98; In Spring, Building up, 499; Requeening, 208, 409; Suspected, Strong, 275
Store Combs and Moths, 378
Stores, Ample, 424
Stray Swarm, 100 years ago, 460
Sugar for Bee Food 129
Super-clearers, Faulty 315; Using, 317
Supering the "W.B.C." Hive, 187

Supers, Clearing, 285, 305, 393; Giving Sugar Syrup for, 398; Completing, 398
Suspected Foreign Honey, 89
Swallows and Bees, 384, 397, 403, 427, 434, 448
Swarm, A Peregrinating, 264; A September, 405; An Early, 184, 194, 258; An Enormous Runaway, 253; Building Combs in Tree, 277; Capturing a Stray, 304; Destroyed in Transit, 267; Mis-hiving My First, 236; Prevention, 26, 86, 188, 274, 406, 432; Recovering a Truant, 227, 243, 304
Swarm-Catchers, 266, 364
Swarm, Vagrant, Entering Deserted Hive 228
Swarming, 26, 53; Artificial, 284, 355; Controlling, 457; Dividing Stocks after, 287; Dividing Stocks to Prevent, 238; Erratic, 244; Excessive, 277, 286; Experience, A, 294; How to Check, 241, 406, 432; Incident, A, 226, 232, 243; Late, 399; More, Bees doing well, 206; Persistent, 307; Time, 252; Troubles, 227, 243, 297
Swarms, Buying, 493, 503; Doing well, Early, 208; Forced, 53; for Transit, Preparing, 238; from Large Hives, 276; Heavy, 363, 385; Making Artificial, 196, 198, 246, 507; not Filling Sections, 275; Novel Plan of Returning, 298; Ownership of Absconding, 236; Returning, 246, 307; Uniting, Troubles Through, 88.
Swarms to Settle, Causing, 514
"Swarthmore" Methods, 84, 135, 154, 193.
Syrup Food for Bees, 10, 99.

Tall Sections, Disadvantages of, 434
Tall versus Square Sections, 433
Tanging Bees, 451, 474
Teacher Bee-keepers, 425
Theory, the Odour, 424
"Thomas' Swarm-Catcher, the 266.
Tilia Petiolaris, 432.
"Tinkering," the Folly of, 336.

TRANSFERRING BEES:—
A Beginner's Queries on, 139; A Mistake in, 477; from Old Hives, 256; from Skeps to Frame Hives, 158, 160, 197, 217, 267, 276, 328, 338; to New Hives, 159, 196, 207, 218, 228, 246, 287, 306, 418; Combs and Bees to Standard Frames, 88, 317, 500; Dangers of, 110; from Hive with Fixed Floor, 30; Stocks from Boxes to Frame Hives, 79; Swarms to Frame-Hive, 327.
Transit, Loss of Weight in, 477, 486.

Uniting Bees, 375: in Autumn, 379, 408, 409
Uniting Four Swarms, 333
Uniting and Transferring Bees from Skeps, 338
Utilising Queenless Bees by Uniting, 278

Vagaries, Queen, 149
Vagrants, Claiming the, 253
Veteran of the Old School, A, 483
Virgin Queen, Experience with, 344
Volume Thirty-two, 126

Wallflowers and White Rock (Arabis Alpina), 37
Warning to Bee-keepers, 226
Warning to Bee-keepers, Word of, 232
Wasp Stings, 364
Wasps, Queen, 192
Watering Troughs, 74, 89
Wax from Old Combs, Extracting, 420
Wax Moth, 108, 312; Getting Rid of, 406; In Hives, Dealing with, 419
Wax Rendering, 386, 397
"W. B. C." Hive, Making the, 208; Transferring to, 228
Weaklings, Strengthening, 255
"Wells" Hive, Uniting Bees in, 227; Working with, 58
White Clover, Dearth of, 335
Wide Combs for Shallow Frames, 335
Wild Bees, Our, 333
Wingless Queen in Hive, 337
Winter, Bees dying in, 158: Do Drones live over, 168: Uncapped Stores for, 458: Keeping Queens in, 439: Losses, 18, 295: Loss of Queen in, 10; Loss of Stocks in, 69: Moving Bees in, 426: Moving Hives Indoors for, 398: Protecting Skeps in, 98: Re-queening for, 354: Stores, Candy for, 379, 409, 438
Wintering Bees, 166: Driven Bees, 167: Experiments in, 386: Queens in Boxes, 177
Wood Ants, 18, 47
Wood-wool, 471
Word from one of the "Hundred," A, 7

Year, the Closing, 511
Yellow Queens from a Colony of Blacks, 316
Yorks, Bees, and Dry Weather in, 391

ILLUSTRATIONS.

"Homes of the Honey Bee":—
Apiary of Mr. S. J. Baldwin, Bromley, Kent, 35
" Mr. G. C. Burgess, Hockerill, Bishop's Stortford, Herts, 495
" Mr. H. M. Cooper, Thorley, Yarmouth, Isle of Wight, 175
" Mr. C. W. Dyer, Compton Crossing, Compton, Berkshire, 505
" Mr. C. B. Elmhirst, Knaresborough, Yorks, 395
" Mr. William Fernie, Fincraigs, Gauldry, Dundee, 485
" Mr. S. Harborne, Chyvarton, St. Buryan, Cornwall, 475
" Mr. Thos. Hood, Pickering, Yorks, 205
" Mr. H. T. Icingbell, Cheddon Fitzpaine, Taunton, Somerset, 245
" Mr. Arthur Judd, Chilwell, Nottingham, 95
" Mr. A. Knewstubb, Long Marton, Cumberland, 215
Apiary of Mr. Giles Latchford, Hurdsfield, Macclesfield, Cheshire, 455
" Mr. J. H. Oldfield, Throapham, Rotherham, Yorks, 235
" Mr. J. E. Phillips, Askham Richard, near York, 55
" Mr. Herbert Patey, Chillingham, Kingsbridge, Devon, 195
" Mr. Alexander Reid, Balloah, Urray, Ross-shire, 225
" Mr. T. Reynolds, Newton Regis, Tamworth, Warwickshire, 465
" Mr. H. Rhys, Redbrook, Monmouthshire, 185
" Mr. David Scott, Kincardine-on-Forth, Fifeshire, 445
" St. Monica's Priory, Spettisbury, Blandford, Dorset, 85
" Mr. A. C. Tew, Maldon, Essex, 115
" Mr. Walter Turner, Lavenham, Suffolk, 165
" Mr. Jno. Waller, Holbeach, Lincolnshire, 155
Apiary of Mr. R. Watson, Hermitage Lodge, Hitchin, Herts, 435
A Bee-man of the Old School, 483
A Unique Christmas Cake, 507
"An Old-time Bee-House," 254
Baldwin, The late Mr. S. J., 34
Bligh the late Hon. and Rev., 105
Canadian Exhibit at St. Louis, 2
Claustral Ventilated Hive and Detention System, The—
Fig. 1. "Claustral" Hive with Ventilating Chimneys, 72
" 2. Closed Detention Chamber, 72
" 3. Ventilating Chimneys, 73
" 4. Two-piece Ventilating Door, Elevation and Section, 73
Colorado Exhibit at St. Louis, 7
"Cowan" Winter Ventilator, 121
Foundation in Saw-cut of Frames, 404
Howard, The late John H., 5
Japanese Honey at Louis, 59
Map of Pinkney's Green District, 322
"Monk's Acre" Uncapping Tray and Extractor, 288
Rack for Store Combs, 97
Taylor's Pipe-Smoker, 289

The British
Bee Journal.

No. 1176. Vol. XXXIII. N.S. 784.] JANUARY 5, 1905. [*Published Weekly*

VOLUME THIRTY-THREE.

We briefly preface our new volume by expressing the hope that length of years will not diminish the confidence of our readers in our good intentions with regard to the mission entrusted to us. Our aim has been to maintain the high position in the bee-world earned by our predecessors in the editorial chair; and if we have succeeded in this, as well as readers have maintained the circulation of the paper, we are very grateful and well content with the result.

For the numerous expressions of goodwill received during the past few days we return our hearty thanks and cordially reciprocate the same. THE EDITORS.

BRITISH BEE-KEEPERS' ASSOCIATION

DATE OF MEETING.

The next meeting of the Council will be held on Wednesday, January 18, not January 12, as printed in last week's issue.

The following is the full text of report of the St. Louis Exhibition by Mr. Walter F. Reid mentioned on page 511 of last week's B.B.J. :—

The Council,
British Bee-keepers' Association.

DEAR SIRS,—As requested, I attended the St. Louis Convention, held from September 27 to 30, at St. Louis, Missouri. This meeting was practically the annual meeting of the National Bee-keepers' Association of the United States, and there were few delegates from abroad. The proceedings will be reported in the usual manner, and there was little of general interest to British bee-keepers.

In the Exhibition, however, there were many exhibits of bee products, some of them of considerable importance. Several foreign countries were represented, and some of the American States had special honey exhibits.

France had a very small exhibit, consisting of a few jars of excellent Narbonne honey and a defective "Gariel" hive.

Madagascar exhibited four cakes of beeswax of pronounced odour, three of which were of good colour.

Réunion showed three bottles of honey of fairly good colour, but indifferent flavour.

Germany did not exhibit any bee products; but Professor R. Klebs, of Königsberg, showed a unique collection of insects in amber, some of which were mounted in a resinous mixture of the same coefficient of refraction as the amber, so that the specimens could be easily studied. Among the sixty-eight exhibits were several apidæ. One was a new species of bombus, while another represented a hitherto undescribed apis much resembling our honey-bee, but slightly larger. Although the pollen baskets appeared to be fully developed yet the compound eyes met on the top of the head as in the drones of the present day, leaving a small triangular space on the forehead in which three single eyes were placed. The upper part of the thorax had a thorny appearance, and seemed devoid of hair. The collection included eight vespidæ, which in their general structure reminded one of South American forms.

Bulgaria showed three samples of candied honey of fairly good quality, and three cakes of wax.

Argentina had three exhibits of honey, one of which, apparently from alfalfa, was of good quality. One cake of wax was also exhibited.

Nicaragua exhibited a cake of nearly black wild beeswax, and also some interesting specimens of vegetable wax, obtained from the berries of a shrub with leaves resembling those of the myrtle.

Mexico had a good exhibit of wax from several provinces. Some large cakes of bleached wax from Jalapa were of excellent quality, and there were good samples from Matamoras and Vera Cruz. Some of the native beeswax was of very dark colour, resembling cakes of chocolate.

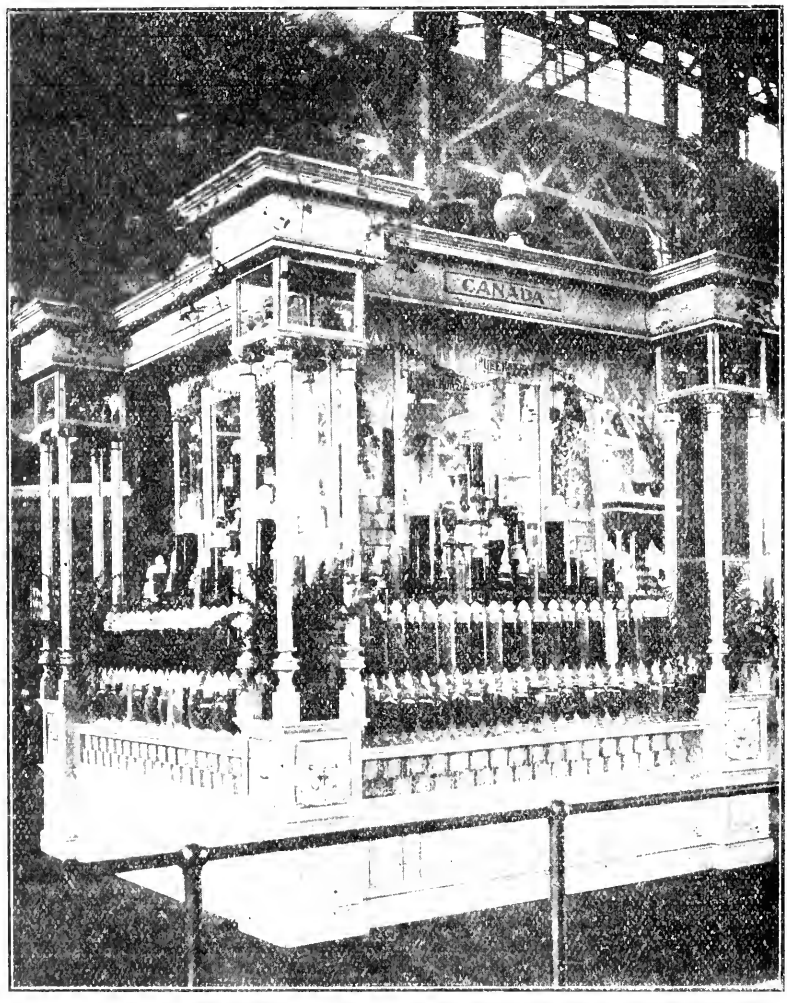
Cuba exhibited a few samples of indifferent honey, packed in wine and champagne bottles! Only one from Guantánamo would be considered of average quality in this country.

Philippines.—The United States had a large collection of Philippine products, including about twenty-five specimens of wild beeswax of various degrees of purity,

and a number of hand-made wax candles as used in the churches. The wax was said to be derived from two kinds of bees, one a large variety, probably *Apis dorsata*, and the other a small bee of about the size of a house-fly, and striped black and yellow, more resembling a wasp than a bee. The cells of the small combs were about $\frac{1}{3}$ in. in diameter, and the native name of the bee was putyucan.

hibitors had contributed towards this collective exhibit, which weighed about one ton, and of which I enclose a photograph.

Among the States of the Union *Colorado* had a very fine exhibit of honey, chiefly collected by Senator G. W. Swink, who owns a number of apiaries. As will be seen from the accompanying photograph, the quantity of honey shown is considerable, being about two tons of sections and



CANADIAN EXHIBIT AT ST. LOUIS.

Japan's exhibit of honey was remarkable for careful and tasteful packing. Some jars—or, rather, stoppered bottles—from the Suwa apiary, Osaka, were specially neat. The hive bee is said to have been introduced about 100 years ago from Spain; but wild bees existed previously in the Japanese forests.

Canada had a splendid trophy of honey, both run and in comb. About fifty exone ton of extracted honey. The whole of it was of good quality, and there was also some excellent beeswax.

Utah showed a collective exhibit of about 5,000 lb. of excellent alfalfa and white clover honey. As shown in the photograph, the honey was packed in large glass jars 4 ft. high and 9 in. in diameter, with glass lids.

California would have made a better

show had her exhibits not been split up into counties. San Diego County showed some good white sage honey, and Los Angeles some extra large sections of good quality. More than one hundred sections from Fresno contained good honey, but were badly finished, judging by our standard, and the same may be said of a number of sections from Sacramento. Perhaps the best exhibit of run honey was from Los Angeles county. It was packed in clamped jars, the price being 1s. 0½d. per jar.

Nebraska.—The custodian of this exhibit Mr. W. James is himself a bee-keeper, and gave some interesting information upon the bee-keeping industry in this State. The chief sources of honey are alfalfa, white clover, and heartsease (*polygonum*). The latter is not of first-rate quality, and is most used for confectionery. Langstroth eight-frame hives are chiefly used, and the yield of honey averages about 45 lb. per hive. A large number of samples of honey were shown, which had been collected and arranged by Mr. Stilson.

Arkansas was only represented by one jar containing comb and honey mixed, the flavour of which was good. There seems to be an opinion that the flavour of honey is improved by an admixture of comb.

Missouri had a large trophy of honey, badly staged, the sections being shown in their packing-cases. Some honey was exhibited in stoppered bottles, and was very deficient in flavour of any kind.

Kansas showed a few samples of alfalfa run honey of average quality.

Mississippi had both honey and wax exhibits. Some of the honey was from the *melilotus*, and of excellent quality. The *melilotus* was said to have been introduced before the alfalfa, which latter is now supplanting it. Six samples of wax appeared to be of good quality; but it is difficult to judge wax when the temperature is above 90 deg. Fahr.

Iowa staged about half a ton of section-honey of average quality, but no extracted honey. About 1 cwt. of good wax was also shown.

Louisiana had a smll exhibit of ½-lb. jars of honey marked "Golden Rod," "Morning Glory," and "Willow," of which the last had the finest flavour.

Oregon was represented by a small quantity of inferior honey. It is said that the honey gathered near the coast was inferior in quality to that obtained further inland.

Idaho had a small exhibit of sections arranged in fancy design.

New Mexico showed about 100 sections and 50 lb. of extracted honey, chiefly alfalfa. The bulk of this honey was produced at a height of 3,600 ft. above sea-level. A jar of about 2 lb. sells for 1s. 0½d., and the business appears to be remunerative. The chief apiarist owns about 1,000 hives. When he arrived at the place where his bees are now located his whole belongings consisted of two wagon-loads of hives and a tent, and he is now a prosperous colonist.

There were very few bee-appliances exhibited at St. Louis. The A. I. Root Co. had an exhibit of well-made goods familiar to bee-keepers, but which contained nothing new except a novelty in form of a smoker without a nozzle.

There were three hives of bees in the horticultural building, of which two were of the Italian variety. It was remarkable that while the humming-birds drove away both butterflies and native bees from the beds of flowers in the exhibition grounds, they took no notice of the hive-bees. Up to the middle of October the bees were still bringing in honey from numerous wild flowers, especially "Golden Rod" and "Aster," a small Michaelmas daisy.—Yours truly, WALTER F. REID.

(*For Illustration of Colorado Exhibit see page 7.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

AMONG THE BEES.

SOME USEFUL HINTS.

[5740.] *Introducing Queens.* — If it is desired to re-queen, say, a driven lot of bees, or an artificial swarm which has to be dispatched to a distance, here is a plan guaranteed to procure the safe acceptance of such a stranger queen. Consign the bees to a swarm-box, giving ample ventilation either by wire cloth or strainer cloth. Leave bees in an outhouse over-night, broodless, combless and queenless, and in the morning, or, indeed, at any time of the day after a lapse of eight hours, simply throw the queen down among the bees, and they will accept her without any questions asked. The same plan may of course, be adopted for home manipulations, and for many novices at times it may be the best

plan to follow when introducing a valuable queen.

Grading Honey.—I think that honey should be graded into three classes only. All the first-class should be placed to one side, and should include only perfect sections—by that I do not at all mean that they have not a single fault, or that all of them are fit for the show-bench. Such perfection is rarely found in this sublunary sphere in any person or thing. All, however, should be 16 full ounces, truly built, and with cells completely sealed. Second-class should approach as near as possible to the pound, have very few popholes, and be well sealed. The third-class should consist of all of light weight, defectively built, with many unsealed corner cells. All these should be used at home, or given away to friends. Their inclusion in a sale deteriorates the lot. The least filled of these might be profitably extracted, and the comb kept for bait sections the following year.

Frame Spaces.—A "symposium" on frame-spacers might prove instructive. It would reveal the fact that the famous "W.B.C." metal ends have ousted almost all others. Their cost is in their favour as compared with cast metal; they are thoroughly efficient, and look as well, at least, as anything on the market. They are easily adjusted, suit so well for narrow spacing where practised, and give such perfect accuracy that I would have no other. The dread of some that they act as a chiller is a mere chimera. I have not seen nail-spaced frames for a long time, so I conclude they are discarded. Very few indeed dispense with spacers entirely. Many who tried rued their temerity and have reverted to metal ends. Wood, when used, is liable to get detached, and may lead to a catastrophe. Of broad shoulders, all I have to say is, I started with them, but very soon cleared them out.

Shade Boards.—These should be adjuncts of all hives in winter. Bees in late winter and early spring, when attracted by chance bright gleams of sunshine, are often tempted out at unseasonable times. When snow is on the ground the bright glare draws them out, and then too many of them find an untimely snowy grave. With a considerable depth on the ground drifted in about the hives the best plan is to keep it heaped up in front of the entrance, and so make the bees voluntary prisoners. The cluster is thus kept intact, and the bees are made to believe that their own fireside is the cosiest place in the whole world. They should, however, never be compulsorily confined. Even with snow on the ground, they will at times manifest an ungovernable desire to have a flight, and when in spite of careful precautions, they insist on this, it may be best to let them have their own way, as the less of two evils. Neither in this nor any other case should force be applied to bees as a remedy.

Fertile Workers.—Two cures for these nuisances may be given. First, carry the hive bodily to a distant part of the garden. Shake the bees on to a sheet or old newspaper and let them return home, which, if the operation is performed in the middle of a very fine day, they very quickly do. The fertile worker or workers, unable to find their way, are got rid of. Second, on seeing two or three eggs in one cell, where it is known no aged queen exists, examine and certify that there is no proper mother. Then simply part centre combs, leaving a fairly wide space, and gently place a frame, with brood in all stages, on which there is a laying queen. You may have every confidence this mother bee will be accepted as the true queen, and all usurpers either expelled or otherwise deposed.

Isolated Diseased Cells.—Do not tinker with these when you are convinced they exist in the hive but cut them out and let the bees rebuild the space. If a few have to be cleared out, cut a similar-shaped piece from any comb lying about, and place it in the vacant space, when the bees will soon fix it up securely. In cutting out these and pieces of drone comb or any defectively built, I use a circular tin lid, if possible sawing it through, then cut the other piece of comb to same size in the same way, and press it carefully in the vacant space. The bees will do the rest, and finish off the job so perfectly that you will generally fail to see where they have jointed it on. Even in the incipient stage I would have these small pieces of comb eliminated and burned. As suspects even, they are better out of them than inside the hive.

Bee Clubs.—Do not think that perfection in bee-keeping comes by instinct; on the contrary, to become successful requires careful study. Village bee clubs should be formed wherever possible, and the members could each purchase a good bee book, the contents of which, by interchanging, could become the common property of every member. All the best bee newspapers could also be shared in the same way and thus each could become familiar with all the latest and best known about apiculture here and in America. The members of the club could meet frequently and discuss informally all new points as they crop up. While thus mutually assisting each other in many ways, they would soon acquire all that need be known about the most successful management of bees. I know of no body of men more willing to impart to novices whatever information they may possess than bee-keepers.—D. M. M., Banff.

(*Correspondence continued on page 6.*)

DEATH OF MR. JOHN H. HOWARD.

It is with the sincerest sorrow that we announce the passing away from our midst of one of the most genial and popular men ever connected with the bee industry in the death of John H. Howard, which took place suddenly from heart failure on Tuesday, December 27, at his residence, Holme, Peterborough.

Though keeping fairly well, and attending to business as usual, it has been known among his family for some time past that our friend suffered from a weak heart, and no doubt it was from this cause that he had been more seldom seen at shows and meetings of bee-keepers than formerly. But to ordinary folks he seemed in good health; indeed, only on the day prior to the fatal attack he visited his brother at Huntingdon in his usual health and spirits, returning home by the last train none the worse for his outing. Next morning, however, before rising, he complained of feeling unwell, and before his wife could summon assistance he had breathed his last.

Probably no man in the appliance trade was favourably known to so wide a circle of bee-keepers as John Howard. His business methods were so straightforward, prompt, and thoroughly honourable as to command respect and approval from all who dealt with him. Not only so, but his nearest friends among bee-men were among those who knew his worth and loved him best, and, as we learn, the whole village where for many years he lived and laboured for the general good will feel his loss deeply.

The funeral took place on Saturday last in Holme Churchyard in the presence of an assemblage of mourners so large as to overcrowd the church, of which the deceased had for many years been rector's warden.

THE LATE JOHN H. HOWARD.

Many well-known public bodies were represented at the funeral, and numerous beautiful floral wreaths were sent from the members of his family, relations, and loving friends, among the latter being Lady Louisa Wells; John H. Fielden, Esq., Holme Wood; the Hunts Bee-keepers' Association, Council of the British Bee-keepers' Association, Editors BRITISH BEE JOURNAL and *B.K. Record*, the tenants and employees of the Holme Wood estate, and numerous others.

The greatest sympathy of the whole neighbourhood was manifested for Mrs. Howard and family.

CORRESPONDENCE.

(*Continued from page* 4.)

THE PROPOSED FOUL BROOD ACT.

[5741.] Though not empowered to write in the name of the framers of the original Bee Pest Bill of 1896, or of the Committee who have recently revised it for present use, I think I may say that both bodies have recognised the imperative necessity of its being drawn up in as non-contentious a form as possible. This being so, it is quite natural that such provisions as are suggested in the inquiry of "A County Councillor" (5727, B.B.J., December 22) should not form part of it.

Let us first consider his suggestion No. 2. It is but a small interference with the liberty of a subject that the hives standing in a bee-keeper's garden or apiary should be opened and inspected by an authorised, if haply an uninvited, expert. To remove part of the roof of a man's dwelling-house or stables in pursuit of a swarm, pick holes in his walls or in the trunk of his favourite lawn tree is a very different proceeding—one which he could hardly be expected to contemplate with equanimity, especially when, not being himself a bee-keeper, he has no sympathy with the excuse for intrusion. Moreover, one of the consequences of the proceeding might well be a considerable bill for damages. Better surely to look on so thorny a matter as outside the scope of present legislation. I would place these cases in the hands of a tactful expert, who, calling in his official capacity, should explain why action was desirable, and I have little doubt that his gratuitous services would in many cases be welcomed, or at all events accepted with civility. I cannot conceive that power would be granted to county councils to take action against the desire of the owner. Payment out of public funds for damages caused in the removal of errant swarms might possibly be authorised, but the season seems to me hardly opportune for thus increasing the burden we propose to lay upon ourselves as ratepayers, the more so that the danger of infection from undisturbed wilding colonies, though danger undoubtedly does exist, is not very formidable.

It is not hard, I think, to show that the other provision sugested by "A County Councillor" is unnecessary and unpracticable. No bee-keeper, whether dealer or not, would knowingly import diseased queen bees or stocks, nor is it likely that a foreign dealer would imperil his trade connections by knowingly sending them. As a matter of fact the import trade is almost entirely confined to queens; and a young queen with a handful of attendants, the latter generally sacrificed at the time of introduction, is not a great source of danger. Let us grant, however, that prohibition is desirable, in spite of the many difficulties, postal and otherwise, that must be encountered in enforcing it. We are still only at the beginning of our trouble. Let us be logical. If foreign bees are to be excluded as undesirable aliens, is it reasonable that their chief product, honey, an admitted conveyer of the germs of disease, should be allowed to pervade the land? I trow not. Then, as all countries where bees are kept are more or less afflicted with foul brood, what is to become of our poor grocers and chemists when they may only purchase English honey at fair prices? Truly a calamity not to be endured. And (dear me!) what a shameful interference with the food of the people! And (dear me! dear me!!) what an unfortunate clause to tack on to a Bill that so many of us hope to see creep quietly through the High Courts of Parliament!

No Bill can be depended upon to make us absolutely free from bee-pest. But half a loaf is better than no bread, and in this case the loaf will be a fairly round one and good value for the money. It is difficult to prove the financial fact, but with the compensation reduced by half, to 5s., I much doubt if the expenses of administration could reach £150 in most counties, and if they did it would not be a very formidable addition to the rates, a small fraction, I take it, of a penny. And "A County Councillor" should remember that the outlay will not, it cannot in the nature of things, remain, as he seems to imagine, at "£150 *a year*." If the Act proves to be of any practical value —and why doubt it?—the sum should steadily fall until it has reached the small amount required to keep in check the residuum of disease which the present generation of bee-keepers may always have to encounter.—H. J. O. WALKER, Lt.-Col., Leeford, Budleigh Salterton, December 27, 1904.

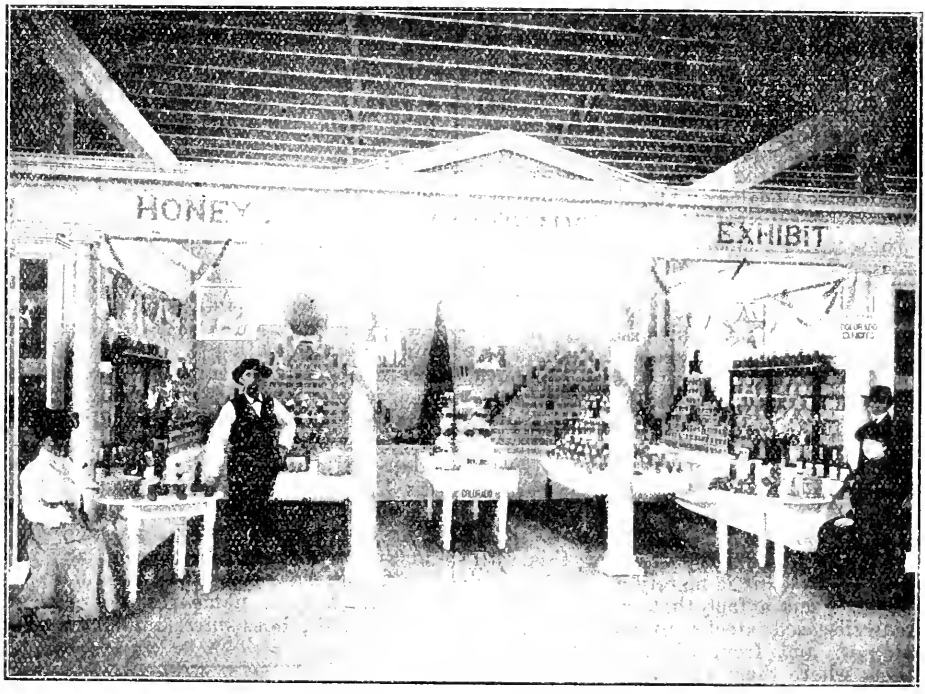
OPPOSING LEGISLATION.

A REQUEST FOR THE VIEWS OF BEE-KEEPERS.

[5742.] The advertisement over Mr. Woodley's name in your issue of December 29 is a very significant comment on my letter the week before; but his one-sided action must be met. As you, Sirs, are aware, I have, from the very first meeting of the Committee appointed to deal with the subject, strongly urged the necessity of obtaining the support of the great body of bee-keepers in order to influence the decision of the County Councils in favour of the Bill. I by no means wish to overlook the opponents to the measure. What we urgently need now to

know is—Who is for and who is against the legislation now proposed? The Bill has been now for some time in the hands of all your readers. Those who have not yet made up their minds can be disregarded, for the subject has been debated ad nauseum. I now ask you to publish in your advertisement columns the enclosed notice. [See page v.—EDS.] I am willing to undertake the trouble of tabulating the answers for the benefit of the Committee, and when Mr. Woodley has furnished you with his names or the number of them, I will also publish the result I get. Only let it be fully understood I want both sides to express their decision.

A bee-keeper who at this crisis will not make up his mind and spend a halfpenny in sending us his vote is unworthy of the name.—THOS. I. WESTON, Vice-Chairman B.B.K.A., Hook, Winchfield, January 2.



COLORADO EXHIBIT AT ST. LOUIS.

FOUL BROOD LEGISLATION.

[5743.] Will you kindly allow me to say that I am in full symapthy with Mr. Woodley in the position he has taken up with regard to the above and that every objection he has raised thereto has my most hearty support. I should also like to inform Mr. Weston that he is labouring under a great delusion when he assumes that the big bee-keepers who are opposed to legislation consist of only "Mr. Woodley and another." I have before me the names of a dozen bee-keepers whom I have met during the last few months, all of whom are dead against legislative interference, and who own between them 1,500 to 2,000 stocks. This, I think, will show that Mr. Woodley's position is by no means a solitary one. Indeed, I have a very strong belief that if a vote could be taken it would be found that those who are against legislation have a very much larger interest at stake than those that are in favour of it. There are many weighty reasons why "big bee-keepers" are opposed to the Bill now under consideration, which I will not trouble to enumerate now, but I will do so later on if necessary.—ALLEN SHARP, The Apiary, Brampton, Huntingdon, December 27.

A WORD FROM ONE OF THE "HUNDRED."

[5744.] I read Mr. Woodley's article on page 492 with great interest, and feel that if the proposed Act is to be of real service, not only will expert inspectors be required, but inspectors of "expert inspectors" also,

whose duty will be to follow the first-named about to see that they disinfect their hands and destroy carbolic cloths after having examined a diseased apiary or stock. Of course the experienced bee-keeper will see that this is done; but what of the ordinary bee-keeper who never thinks or knows of the importance of this?

Mr. Weston, in the B.B.J., dated December 22, writes asking for the names of one hundred bee-keepers of twenty-five stocks and over, who are opposed to the Act. I am one of these, and own fifty stocks.

My experience of foul brood is as follows:—I was a bee-keeper for some years previous to 1898, and never had a case of foul brood. During the spring of that year my apiary was first visited by an expert, who passed my twenty-five stocks as all healthy. The spring following foul brood made its appearance in several stocks, and when the expert called these stocks were treated on the starvation principle, and all the other stocks examined and declared healthy; but the spring following (1900) the greater part of my apiary of some thirty stocks was found to be more or less affected with foul brood.

Well, with the help of a friend (not an expert) I took off my coat and tackled the job; and this is the strange part of the matter. The experts have called to see my apiary each year since that date, but have not been allowed to handle anything belonging to the bees. All frames have been lifted by myself for their inspection, but as regards them my motto has been "Hands off," and I have not had a single case of foul brood in my apiary since my experience of 1900.

No doubt the supporters of this Bill will say that this is merely a coincidence; but is it not a fact that experts wander from diseased stocks to sound, healthy colonies, and from diseased apiaries to others where there are only healthy hives without any washing of hands or changing of carbolic cloths upon which the match that has been used to probe the diseased cell has been wiped? Need I say more?—P. H. Pugh, Grosvenor Street, Mold, December 27.

[5745.] Judging by his recent "Notes by the Way," Mr. Woodley appears to have made up his mind that there is no room for improvement in the present state of things with regard to foul brood; yet he fails entirely to suggest an alternative to the proposed Bill. I do think that in order to obtain a measure which will be of the greatest good to the greatest number—and I hold that the present Bill will be—we should have opposition, not of the cantankerous variety, but of the kind that has a practical alternative to offer. One may, of course, take exception to some detail or even regret that its scope is not sufficiently wide, but to condemn the Bill because of this is surely absurd. There is no getting away from the fact that the majority of bee-keepers are in favour of a measure to prevent foul brood—that is judging from bee-keepers in our county of Lincs., and the articles in the B.B.J.—where we, happily, get the views of very few who write from Mr. Woodley's standpoint. For myself, I fail to see that any good can come by placing all that is good in the proposed Bill out of sight, and putting what is supposed to be bad under the magnifier.—T. W. Swabey, Bracebridge Heath, Lincs, January 2.

HEATHER HONEY.

[5746.] Seeing that heather honey is always in demand and commands a good price, it is important that the best ways and means of securing it should be understood. We read a great deal about sending hives to the moors, but I have not seen any reference made regarding the best sort of moors to send them to. I should therefore like to have the opinion on this point of those who have tried different situations as to what would constitute an ideal situation and surroundings for hives at the heather?

I had a talk recently with an old bee-keeper who had experience with bees at Grantown. He maintained that bees work better and longer in the season at those high altitudes than on the lower levels. As I mean to send some of my hives to the heather next season, and seeing that I have all sorts of hills, moors, and valleys in the vicinity to choose from, any information on the subject will be much appreciated. I send name for reference and sign—A. R., Ross-shire, January 2.

A BEE NOTE FROM GLOUCESTERSHIRE.

[5747.] I am sending you just a line to let you know how my bees got on this year in this part of our county, as I do not see many notes on the bees from hereabouts. I think we have had a very good time, as things go. My average has been 60 lb. of surplus honey per hive, and I never take any part of the in-gathering from body-boxes. I sold out all my sections months ago, and have about half a dozen pounds of extracted honey for sale at the time of writing, but that will go soon. I also must tell you that I was not troubled with the honey-dew; but, strange to say, a friend whose bees are located about two miles from mine had seventy sections quite spoiled with it. I am not sending this expecting you will print it,

for, you see, I am no scholar. I send name, etc., and sign—B., Stroud, December 28.

[Very pleased to hear from you whenever you have something of interest to tell, as in the above. Do not trouble about scholarship, we will fix that up all right. —EDS.]

WEATHER REPORT.

WESTBOURNE, SUSSEX,

December, 1904.

Rainfall, 3·43 in.
Heaviest fall, ·60 on 6th.
Rain fell on 20 days.
Above average, ·64 in.
Sunshine, 56·04 hours.
Brightest days, 19th and 21st, 6 hours.
Sunless days, 13.
Below average, 3 hours.
Maximum temperature, 55° on 6th and 16th.
Minimum temperature, 25° on 9th.
Minimum on grass, 21° on 9th.
Frosty nights, 7.
Mean maximum, 46·6.
Mean minimum, 36·2.
Mean temperature, 41·4.
Above average, 3·5.
Maximum barometer, 30·63 on 19th.
Minimum barometer, 28·95 on 12th.

L. B. BIRKETT.

WEATHER REPORT

FOR THE YEAR 1904.

WESTBOURNE, SUSSEX.

Rainfall, 30·41 in.
Heaviest fall, ·89 on May 20.
Rain fell on 186 days (average 173).
Above average, 1·22 in.
Sunshine, 1,802 hours.
Brightest day, June 30, 15·1 hours.
Sunless days, 69 (average 63).
Below average, 43
Maximum temperature, 81° on Aug. 3.
Minimum temperature, 23° on January 1.
Minimum on grass, 16° on November 23.
Frosty nights, 59 (average 76).
Mean temperature, 49·6°.
Above average, 1·7°.
Maximum barometer, 30·77° on January 22.
Minimum barometer 28·83° on February 9.

L. B. BIRKETT.

Queries and Replies.

[3638.] *Bees Building Combs Across Frames.*—A friend of mine is in difficulties with one of her hives. The bees, instead of building their combs within the frames in the usual way, have built them right across the top-bars, and not very regular either, making it impossible to move a single frame. She got no surplus honey from this hive last year. I should be obliged if you would tell me what I can do to help in this case—I mean, how should I proceed to transfer the combs to frames, and at what time should it be done?—I send name, etc., and sign—NOVICA, St. Albans, December 29.

REPLY.—The task you propose to undertake is a stiff job, and unless you have had some experience in such work we do not advise you to tackle it without expert help. Not only so, but we will require particulars of the hive to be operated on, as from the rough sketch sent we take it to be of the "combination" type. If our surmise is correct, it will have a fixed floor, and as the cross-built combs would need to be lifted out *en bloc*, or the hive be turned upside down in order to get the combs out before cutting them away one by one, some idea may be formed of the task involved. As regards the most suitable time for operating, it must be on a warm day in spring when the bees are flying freely. We need say no more till you write again, as requested.

[3639.] *Location for Hives.*—I shifted my bees (three hives) last back-end nearer to my house, so that I might see them when swarming and so give me a greater interest in the hobby of bee-keeping. Unfortunately the new position is not so favourable as before, for the hives now get less of the sun's rays to fall upon them, and, in consequence, the bees do not get out at all for a cleansing flight. I think it will be about next month's end before the sun will attain an altitude requisite to afford the desired warmth. The hives contain plenty of stores to last the bees till the end of February, and all are headed by young queens. Will you kindly say if their position will be at all against them doing well in the coming season, or would you advise me to get them shifted to a more sunny aspect?—H. JACKSON, Co. Durham, January 2.

REPLY.—The slight disadvantage you have named regarding the sun's rays not falling on hives till end of next month will do little or no harm, so we advise leaving the hives as now.

[3640] *Introducing Colonies of Ants into Woods.*—Will you kindly ask, in next issue of the B.B.J., if some reader can kindly tell me how to introduce those large ants—"wood-ants," I believe they are called—into a wood? I mean that kind whose nest consists of a large heap of short pieces of stick. There are plenty within a short distance of me, but none in my woods. Do the fertile females live alone through the winter like wasps, and then each one found a new colony in the spring? If so, I ought to be able in April or May to find a nest just started and move it to a new locality. Or do they migrate to new places—females,

males, and neuters—like bees? I should be thankful for any information.—I send name and sign—EAST KENT, December 29.

REPLY.—Though unable to answer above query ourselves, there may be some reader possessing the requisite knowledge; and, if so, we will be obliged if they will favour our correspondent as requested.

[3641.] *Making Syrup food for Bees.*—I should be pleased with a reply in next issue of BEE JOURNAL to following questions:—1. In what proportion should *Naphthol beta* be mixed with methylated spirit for feeding with syrup? How much of the mixture would it take to medicate, say, ten pounds of sugar made into syrup? If corked down, will it keep for a year or more? 2. What is the cause of light-coloured and streaky patches being on the sides of some of the screw-capped jars of granulated honey? Is it a sign of bad quality? 3. What makes some of the screw-capped jars crack after the honey has granulated? It does not appear to have worked. I send name and sign — SAM YANK, Yarmouth.

REPLY.—1. Full directions on the points named will be found on every packet of N. beta sent out from this office, and seeing that the strength and quality of the product sold varies so much we cannot answer for any other. The solution will keep good for a long time if well corked. 2. The light-coloured patches in granulated honey is mainly caused by want of skill or experience in "jarring-off" the honey when liquid. The screw-caps should not be put on till all air bubbles have risen to the surface; and the honey should not run into jars too quickly. 3. The jars do not crack when properly handled.

[3642.] *Removing Bees.*—I have to remove some bees from a part of my garden where they occasionally sting horses that are grazing in a paddock on the other side of an iron fence. It seems to me that the best course is to remove the offending stocks for a time to a place, say, a couple of miles away. 1. Is that distance enough to prevent loss from returning? 2. How long must I let them remain at the new site, before I bring them back to the place where I wish them to stand permanently?—J., Lincs.

REPLY.—1. If moved two miles away, as proposed, no bees will return to the old stand or get lost on flying abroad. 2. They should have a month or more in flying weather, before being returned.

[3643.] *Loss of Queen in Winter.*—I am writing to ask what your opinion is as regards the queen-bee I am sending you. Last August I found some queen-cells uncapped and with lids hanging down, and came to the conclusion that the bees had requeened themselves. This was also the opinion of the expert after hearing particulars, but there was no brood whatever in the comb. This morning, however (December 29), I found this queen bee sent outside the hive, while the other bees were all in a commotion, rushing about the entrance. I therefore ask—Do you think this is a virgin queen or a very old one, as it is so small? 2. What had I better do with the stock, which is very strong? I have eight good stocks, but it is rather difficult to know exactly what to do in the winter. Awaiting a reply in the BEE JOURNAL.—H. SPENCER, Teddington, December 29.

REPLY.—1. The dead insect sent has all the appearance of an adult fertile queen. You must remember that the matronly appearance and greater length of the abdomen observable in the busy laying season is to a great extent absent in the winter, when no brood is being reared. 2. If the parent queen is dead there is no hope of the stock doing any good unless a fertile queen is introduced. We may say there is evidence of rough handling somewhere, for the dead queen has lost half of one of her hind legs.

Notices to Correspondents & Inquirers

ALFRED (Braintree).—Bees and Candy Feeding.—1. If candy is given in warm weather bees will carry in water to liquefy the food; but in winter it is supposed that they consume it only as required for the daily supply, the bees that visit the candy-cake passing it round to the cluster as they do liquid food. 2. The sample is insufficiently cooked; in fact, it is more like half-boiled sugar and water than soft bee-candy, which latter is smooth or "buttery" in grain, and quite soft when scraped with the finger-nail.

BEES IN KASHMIR (Srinagar, India).—The specimens have just reached us, too late for dealing with in this issue. We will, however, reply in our next.

J. BOYES (Cardiff).—Debarring Exhibitors.—We could not even venture an opinion on the case in question without hearing both sides. But, apart from this, it is well known and admitted that the promoters of a honey-show are within their rights in framing the rules under which entries are made. This being so, they would very properly resent interference from outsiders like ourselves. If the committee depart from their own rules, an appeal or protest should be made, and if good grounds were shown for a complaint, we cannot believe that it would be disregarded.

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

The letters we have received during the past few days dealing with the question of foul brood legislation, and the proposed "Bill for Prevention of Bee Pest," would, alone, considerably more than fill our present issue. Moreover, it seems clear that not only does the correspondence consist mainly of a reiteration of views already expressed by the writers, but the subject seems productive mainly of acrimonious discussion likely to do far more harm than good to the cause we all have at heart. We have, therefore, inserted this week as many letters as we can find room for, after a somewhat severe "boiling down," and inserting only those bearing directly on salient points of the case, or from writers who have not previously expressed an opinion on the subject.

This done, we must be allowed to wind up the discussion by requesting all who have not already recorded their opinions, to register their votes on the foul brood question, *both for and against*, by writing either to Mr. Weston or Mr. Woodley, as requested in those gentlemen's respective advertisements in this issue.

ST. LOUIS EXHIBITION.

We are glad to find that the report on page 1 has interested our readers, because it affords us the opportunity of saying that Mr. Reid was duly accredited—as representing the British Bee-Keepers' Association—at the Annual Convention of American Bee-Keepers, held at St. Louis in September last. Unfortunately, however, Mr. Reid's multifarious official duties connected with the Exhibition itself prevented him from being present at the meeting of American bee-keepers on the opening day, or he would, no doubt, have been very pleased to make himself known thereat as the delegate appointed to represent the B.B.K.A., and as a member of its Council.

The importance of Mr. Reid's position on the different juries whereon he served may be judged from the fact that he was vice-chairman of the Liberal Department Jury, vice-chairman of the Horticultural Jury, and secretary of the Appeal Group of the Superior Jury dealing with Horticulture and Agriculture.

Knowing, as we do, how thoroughly Mr. Reid carries out any official duties he may be induced to undertake, we can well understand his time being fully occupied at St. Louis. But if evidence of this were needed, we had it on the occasion of Mr. Reid's recent lecture on the St. Louis Exhibition at the Society of Arts, London, which we had the pleasure of attending, when the chairman of the Commission appointed to organise the British Section of the Exhibition, who presided, declared that he hardly knew how they would have got on without their colleague, Mr. Reid, who was, he said, a perfect encyclopædia of knowledge, while his acquirements as a linguist made him invaluable among the representatives of so many nations.

IRISH BEE-KEEPERS' ASSOCIATION.

"Veritas odium parit."

We have hitherto endeavoured, as far as possible, to abstain from criticising the doings of the Irish Bee-keepers' Association during the last few years, notwithstanding the numerous letters received on the subject, for we had no desire to be drawn into the disputes and wranglings of its committee, and it is with considerable reluctance that we have been forced to give a brief sketch of the Association, compiled from its own official organ. We would have been glad to veil over this gloomy period of its history, in the hope that wiser councils might prevail, but as the committee—who by their recent childish proceedings have made almost a laughing stock of themselves—resented our remarks and those of the chairman of meeting of delegates, and through their official organ have attacked the B.B.K.A., it becomes our duty, in the general interest of our readers, to show why the I.B.K.A. does not represent Irish bee-keepers as a body, and, in consequence, why it has little or no influence in the present move for legislation

In our editorial on page 501 of B.B.J. of December 22 last, we wrote defending the B.B.K.A. against an attack by the official organ of the I.B.K.A. But it would appear that the truth is not palatable to the committee of that Association. We therefore print the resolution passed at a meeting of that committee on December 29—a meeting no doubt specially called for the purpose—and we are glad to give it a much more extended publicity than it could possibly get in the official organ in question. Here it is:—

"That the editorial statement in BRITISH BEE JOURNAL of December 22, making an unprovoked attack upon the Irish Bee-Keepers' Association is erroneous and misleading, misrepresents the facts of the case, and constitutes an unwarranted reflection upon the committee and members of this Association."

As our statements were based upon the published reports issued by the I.B.K.A., and those in the B.B.J., prior to May 1, 1901, and since that time in the official organ of the Association, the responsibility for anything that may be "erro-

neous and misleading," or that "misrepresents the facts of the case," rests with the I.B.K.A.

Referring to the extract from the *Irish Homestead*, the organ of the Irish Agricultural Organisation Society, printed in the editorial in current number of *I.B.J.*, it was, no doubt, penned by our contemporary from erroneous information, and before the writer had seen the draft Bill approved by the Legislation Committee (printed in B.B.J. of December 8 last), and which does not "exclude" anybody. Any man of common sense will see that by the omission of the word "Ireland" from the Bill, its provisions are extended to that country, if the Government chose to adopt the measure. The editor further quotes from the letter of the secretary of the B.B.K.A. of November 9 to Mr. George Saunders as follows: "In regard to your note that Ireland is omitted from the Bill, I am to say that in the opinion of the Committee the omission is advisable."

Although we know how persistently Mr. Saunders has misconstrued the actions of the Council of the B.B.K.A., it seems hardly possible that that "omission" from the Bill could have been other than wilfully misconstrued into "exclusion" by any fair-minded man. Anyway, we still maintain that, notwithstanding the sophistry introduced, and the attempt to misrepresent our meaning, we have no business to interfere with Irish affairs. Our business is with the Board of Agriculture of this country, and Irish bee-keepers have their own Department of Agriculture with whom they have to deal; consequently, if they got their County Committees, who make grants for instruction in bee-keeping, and have Instructors appointed by the Department of Agriculture, to move in the matter, they are more likely to obtain what they want than by the persistent pillorying of the Department in the official organ of the I.B.K.A.

We certainly have never had any wish to exclude Irish bee-keepers from any benefits that may result from legislation, but our cause would be rather retarded than advanced by our joining the Irish Bee-keepers' Association. We think our readers will understand this before these articles are concluded, as we hope to show that it will conduce to the interest of bee-keepers in both countries to act independently. We also consider that if Irish bee-keepers set to work in the proper way they are likely to obtain legislation much sooner than we can, and, personally, we should only be too pleased to hear that they had attained their wishes.

Without further comment, we proceed to give a history of the I.B.K.A. for the last four years.

There was a great difficulty in finding a sale for Irish honey, and in 1899 it was considered by some that the work for which the I.B.K.A. was formed had been carried out and completed; therefore, it was proposed to wind the Association up. The proposal was, however, not carried, and Mr. Chenevix resigned the office of hon. sec. and treasurer of the Association on December 21, 1899, Mr. H. M. Read being appointed to succeed him from January 1, 1900.

Many of those interested in the Association thought it a pity that the proposal to wind up its affairs was not carried out at the time. The Association had a good record, and had done useful work under the fostering guidance of Mr. Chenevix. Its dissolution could then have been accomplished with honour to the Association, and we should not have heard of such instances as that of the Earl of Ross, one of the oldest vice-presidents, who had occupied that position for 21 years, resigning his membership on the grounds that "as the I.B.K.A. is in a chronic state of discord, it can be of no benefit to Ireland." At the annual meeting in April, 1900, Mr. Chenevix was elected a vice-president, and presented with an address, signed by Lord Ardilaun, Dr. Traill, and the hon. sec., expressing appreciation of his services to the Association and bee-keeping in Ireland.

In the following autumn, the I.B.K.A. appointed a deputation, composed of Dr. Traill, Rev. J. G. Digges, Messrs. Gillies and Watson, and the hon. sec., to lay before the Department of Agriculture a "scheme for the extensive promotion of bee-keeping throughout Ireland," which the Association proposed, with the help of the Department, to carry out. The Department reserved its decision pending fuller information, especially as to whether the industry was really profitable. Subsequently at a special meeting to confer with the representatives of the D.A.T.I., Mr. J. R. Campbell, Assistant Secretary of the Department, explained that the scheme submitted was not in accordance with the Act of Parliament, which required that local grants should be forthcoming in any case where the Department made grants, consequently it could not be accepted. With regard to the Department being "asked to promote legislation bringing foul brood within the provisions of the Contagious Diseases Act, the British Bee-keepers' Association being also strongly in favour of the measure," we find the first refusal of the Department, for the *I.B.J.* says: "Professor Campbell considered the chance of legislative help in the matter decidedly remote, and that we must rely on our own efforts."

In the meantime there was an agitation

by some on the Committee of the I.B.K.A. to have a monthly journal of its own, if they could induce the D.A.T.I. and the "Congested Districts Board" to make sufficient grants in aid of such a periodical. A committee consisting of Messrs. Abbott, Digges, Gillies, and the hon. sec. was appointed to get estimates, and to carry out the preliminary work. The C.D.B. only promised a grant of £20, and it was resolved, notwithstanding the refusal of the Department of Agriculture also to make a grant in aid, to proceed at once with the publication. The Rev. J. G. Digges was appointed editor, and the first number of the *Irish Bee Journal* appeared in May, 1901, as the organ of the Irish Bee-keepers' Association, and the new publication received our best wishes for its success

As the I.B.K.A. was endeavouring to obtain assistance from the Department of Agriculture, it was reasonable to suppose that its official organ would do all in its power to propitiate the Department, but on the contrary we find the editor in strong language denouncing it for only offering £150 for pioneer work by the Association. We presume the Department was tendering a fair proportion, in relation to the extent of the industry, of the funds at its disposal. This is what the editor tells the Department with regard to the Committee of the I.B.K.A.: "They have no salaried assistants to prepare exhaustive and, as it seems, useless statistics, specifications and schemes for the purpose of impossible enterprises."

Then he would "like to know how far £150 would go in the extermination of foul brood in a badly infected county, to say nothing of the rest of Ireland." And again we hear of another sore point against the Department; he says: "We owe it no grudge for having refused us a copper coin to assist the establishment of the *Irish Bee Journal*." This appeared in the third number of the paper; so it was quite evident that the Department of Agriculture was not going to have a very comfortable time, so far as the organ of the I.B.K.A. was concerned. The bullying, for we can call it nothing else, of the Department has been steadily persisted in, and in the fifth number of the *Journal* for September we find the following: "Given sufficient time to work out its ill-formed methods, the Department may learn, like any other novice, the value of a little 'technical education,' which hitherto it has proved as unwilling to receive as it seems incapable of imparting, so far as the industry of bee-keeping is concerned. Advice tendered by the I.B.K.A. has, apparently, been in vain, and a recent offer of assistance from one of the most capable experts in Ireland met with a curt refusal."

Small wonder that the Department took no notice of them, when even ordinary amenities were not extended to it. Similar extracts showing the persistent attacks upon the Department can easily be multiplied, for they abound; but we will at present only quote one other passage where the Rt. Hon. Horace Plunkett, the Vice-President of the Department, is alluded to as having stated in a "Memorandum on Agricultural Education in Ireland" "that the half a million farmers and labourers in Ireland" "are all part-owners of the Department's funds." Although the bee-industry was receiving its quota of these funds, the editor of the *I.B.J.* says steps must be taken to let the Department understand that the "bee-keepers mean to have a share of the funds, and do not intend to sit quietly while one of the most profitable industries of the country is being sacrificed to the contemptuous indifference of the officials of the Board."

We next find the Department roundly abused and ridiculed for offering the only space at its disposal at the Glasgow Exhibition, and which the I.B.K.A. did not consider suitable for its purpose, but for all that 24lbs. of Irish honey did manage to find its way to this show. An amusing incident happened about this time, which is worth mentioning as showing the puerile manner in which affairs were being conducted by the executive of the I.B.K.A. An exhibition was being organised in Cork, and the exhibition committee having refused to advertise in the *I.B.J.*, it was actually "resolved that the Secretary of the I.B.K.A. should write to the Lord Mayor of Cork in reference to this matter." The letter of protest was duly written and sent, but the editor tells us a couple of months later that "no reply had been received from My Lord Mayor and his executive committee."

(*Continued next week*).

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5748.] Just a line to bee-keepers who object to compulsory legislation for dealing with foul brood. Support has come by every post since my first appeal, but more is wanted in order that we may speak with the authority of numbers. See advertise-

ment this week; send a postcard or letter giving the number of stocks. Do not send letters with ½d. stamp. I have to pay surcharge. To my friend Mr. Pearman I say we large bee-keepers are expert enough ourselves to manage our apiaries, and will not run the risk of infection by allowing an expert to "expert" our bees. For myself I wrote ten years ago in B.B.J. these words:—"The more I go into the subject of foul brood the less I fear it," and I am of the same opinion to-day. To Colonel Walker, who writes on page 6, I will briefly say that many bee-keepers rue the day they allowed an expert to interfere with their bees. Before the expert came success attended their bee-keeping efforts; shortly after the overhaul (although the expert had given them a clean bill of health) the apiaries became diseased, and many cases are cited in which erstwhile healthy hives have become diseased after the introduction of foreign bees. I have never had my apiaries examined by an expert, nor have I ever introduced a foreign queen or swarm. My active opposition to the Foul Brood Bill is based on my wish to render the best service I can to the industry of bee-keeping, and although we, Mr. Weston and myself, may receive a goodly number of replies, we shall then only touch the fringe of the matter. The bulk of bee-keepers (as regards actual number of individuals) do not read bee-papers or belong to B.K. Associations, and it is only a comparative few among us who will have the chance, or will trouble, to fill up and return papers. So it cannot be conclusive.

Work for New Year.—January 7 was a beautiful spring-like day, and the bees took a much-needed flight, many visiting the watering-place. One would expect for water to reduce the crystallised honey in the store combs, rather than an indication of breeding being started so early in the year. I notice that complaints have come from bee-keepers of their honey crystallising earlier in the season than usual, and I have no doubt that the stores in the hives have also crystallised. This means more work for the bees in using it as food, as compared with liquid honey. Therefore it will be advisable to keep a supply of water near the hives in a sheltered and sunny spot, thereby conserving the lives of the bees. When they have to go a distance in cold, chilly weather for water they are often lost on the journey, especially if the apiary is in an exposed position.

Planning for the Coming Season.—During the long evenings the bee-keeper who intends to succeed in the coming season will be busy making preparation, fixing up his appliances and laying his plans on the lines by which he means to break the record of past years. In every walk and business of life we see the careful, thoughtful planner pushing ahead of his fellows and taking time by the forelock, but leaving nothing to take its chance; nor is there any craft or hobby which to be successful requires more forethought than bee-keeping. All stocks must be strong and well fed in order to ensure strength at the time when strength spells success; but unless the bee-keeper keeps everything connected with the apiary ready, the hives "boiling over" with bees, his efforts will be wasted. Supers must be ready and used in good time, so that strong colonies can be put to work directly the first flow of honey starts. The continued success of some of our prominent bee-keepers has in the main been of their own making. To every one in the craft I therefore say: Be prepared. If you are wanting new bee-goods for the coming year, order early. By so doing you will be better and more quickly served, while your appliance manufacturer will also be benefited—so the advantage is mutual.—W. Woodley, Beedon, Newbury.

THE FOUL BROOD BILL.

A B.K.A. CHAIRMAN'S VIEWS.

[5749.] Just a line to wish every success to the Bill formulated by the B.B.K.A., and I, for one, am very grateful to that body for the pains they have taken and the amount of time and thought expended in its preparation. If it becomes law, as I hope it may, I shall have no fear in allowing, and heartily welcoming, the expert appointed to inspect my bees, as I should look upon it from a business standpoint, viz. that the person appointed would surely have sufficient business acumen to know that his position and future prospects would in a great measure depend upon his individual effort in suppressing in his district our arch enemy, foul brood; and that the greater his success in this direction the more his services would be appreciated, and the more secure would his position become.

Is not an expert appointed by a county B.K.A. doing precisely (with the exception of being able to destroy) what an inspector would have to do? Then why this opposition, as my experience is that unless a member of an association receives a visit from an expert, he does not think he is getting value for his money? Unfortunately, my association were unable, through lack of funds, to engage an expert last year, and, consequently, there was some grumbling. We contemplate engaging one this season, but as Mr. Allen Sharp states (on page 7) he will give some "weighty reasons why big

bee-keepers are opposed to the Bill," I should be glad to hear them, as I certainly consider a visiting expert on all fours with an inspector appointed under the proposed Act. — CHAS. J. MAPEY, *Chairman, Cambs. and Isle of Ely B.K.A.*

BEE-PEST LEGISLATION.

[5750.] It seems impossible to make the opponents of legislation regarding bee-pest understand two or three things. We must, therefore, continue repeating (*a*) that the Bill proposed is expected, if passed, to very greatly diminish the "pest" throughout the country, and *in course of time* to practically stamp it out. Naturally, the most desired result cannot be immediately achieved, any more than was the case with "rabies." (*b*) Experts or inspectors so dishonourable as not to take precautions against conveying the germs of the disease from one apiary to another will soon be dismissed. Moreover, stringent regulations on this point would be enforced by county councils. (*c*) Errant swarms are written about as if they were usually infected. Surely this is not only a *petitio principii*, but probably contrary to all fact, since stocks badly diseased, and so weakened, are hardly likely to swarm at all.—W. H. HARRIS, Hayes End, Middlesex.

CAN THE "BILL" BE IMPROVED?

[5751.] Without ever having had the pleasure of meeting Mr. Woodley, I shall be quite safe, I think, in saying that he would never hold that "there is no room for improvement" as suggested by your correspondent, T. W. Swabey (page 8).

I venture to suggest that every one will admit that there is room for improvement in everything, not excepting the Foul Brood Bill itself. I venture to say the Bill in its present form would cripple the industry it claims to protect. Section 4 (sub-section i.), which gives power to an official to enter your apiary, practically whenever he pleases, and turn hives inside out, and, as many have suggested, infect the stocks he examined, will meet with strenuous opposition. There is too much "mailed fist" about it. Such power does not exist under the Public Health Acts (I speak from professional knowledge of these Acts), and is therefore much less likely to find favour in the proposed Bill for dealing with foul brood. If, however, a Bill was prepared on similar lines to the Notification of Infectious Diseases Act (52 and 53 Vic., c. 72), the whole object desired by the promoters of the present Bill would be gained in a far less objectionable manner. Notification must necessarily be followed by inspection, with thorough cleansing and disinfection either by the official or under his guidance.

Should notification be ignored, after the requirements of the Act have been brought before the notice of the suspected offender, an example could be made by enforcing the penalty for non-compliance, as a last expedient. Tact will open many locked doors.—OSBORNE SMITH, Westminster, S.W., January 7.

BALLOT OF BEE-KEEPERS.

[5752.] I am a little surprised that Mr. Weston has decided to take an unofficial ballot of bee-keepers on the question of applying for an Act to deal with bee pest, in view of the fact that my proposition at the meeting of delegates that an official ballot should be taken by the British Bee-Keepers' Association was not carried. Though I think that an official ballot would be most useful, as it would be unquestionable evidence as to the wishes of a very large body of bee-keepers, I must confess I cannot see much use in Mr. Weston's obtaining a hundred or two proxies, even if he should be able to obtain anything like that number. If it is thought that the opposition to legislation started by Mr. Woodley should be met with a canvass of bee-keepers, why not revert to the method suggested in my resolution which appeared in the B.B.J. of October 20 last, page 411.

My own view still is that the time is not yet ripe for the movement to be proceeded with, but that with the impetus given to bee-keeping by the grants from County Councils, and with the looking up of non-members of associations by experts (I can certainly speak of the good done in the county of Middlesex), the time may not be far distant when the movement may be proceeded with with every likelihood of success. Still, if a large majority of bee-keepers were to vote in favour of legislation, I am confident that Mr. Woodley, and others who at present object to the application for legal powers, would sink their own wishes in deference to the opinions of the majority.

At present we have no idea as to the wishes of the general body of bee-keepers; and as to the vote by "delegates," at the meeting on October 6, I am afraid that many were simply stating their own opinions: in other words, how many out of the thirty or forty who voted had been duly appointed to vote on this important matter by the members of their associations?

As a matter of fact, the question has been somewhat rushed through, probably in consequence of the well-intended efforts of Mr. Saunders; but as country associations have not yet held their annual general meetings, there is still time for

the views of members to be obtained, and these, added to those obtained by Mr. Weston's appeal in your journal, would prove unquestionable evidence as to the wishes of a very large number of practical bee-keepers.—JOSEPH B. LAMB, *Hon. Local Sec. Middlesex B.K.A., and representative of the M.B.K.A. on the B.B.K.A. Council,* St. Albans, January 8.

THE FOUL BROOD CONTROVERSY.

A COUNTY COUNCILLOR'S VIEWS.

[5753.] May I be permitted to answer Colonel Walker's letter on the Foul Brood Bill? With regard to his objection that it is an undue interference with the liberty of the subject to destroy wild bees in houses, etc., allow me to point out that it is waste of time and money to clear an apiary of the disease, while the wild bees in the neighbourhood are left untouched.

A good dose of sulphur and stopping the hole by which they enter the tree or house with carbolic and cork would do all that was necessary, in most cases, and cause but little inconvenience.

As to the importation of foreign queens, I have known several instances in which the disease has been introduced into a district by them, and it is obviously impossible for a dealer who imports a large number of queens to be able to guarantee that they are all healthy.

In combating disease among animals, it has been found necessary to prohibit the importation of live stock from infectious countries—"for example, Iceland sheep are excluded"; and many countries have bye-laws regulating the importation of cattle, etc., into them; and if this is necessary it is impossible to understand why a measure which does not follow on the same lines can be expected to stamp out disease among bees. Let us, as Colonel Walker says, be logical; dead meat from infected countries is imported; put honey in the same position; the latter is used by human beings and not by the bees.

I do not agree with Colonel Walker that under the proposed Bill the expense will diminish year by year, so long as nothing is done to destroy wild bees, and there is free importation of foreign queens, there will be constant outbreaks of the disease, and the ratepayers, seeing no return for their money will object to the expenditure.—A COUNTY COUNCILLOR, Dumfriesshire, January 8.

MR. T. I. WESTON'S APPEAL.

[5754.] In answer to Mr. T. I. Weston's appeal for votes on the above subject, I wish to say that although not opposed to foul brood legislation, I am certainly opposed to the Bill as at present drafted:—1. Because it neither contains provisions for dealing with stray stocks in trees, etc., nor power to control the importation of bees, etc., from abroad. 2 (and mainly). Because Clause 4 of Bill places the apiaries of all bee-keepers at the mercy of the expert, without any restriction whatever.

Unless there is some provision for preventing an inspector or expert from visiting healthy apiaries against the owner's wish, I shall support Mr. Woodley, and I hope a large majority of bee-keepers will do the same.—W. PATCHETT, Cabourne, Lincs. January 7.

[5755.] There was a time when in "Notes by the Way" we used to look for, and find, hints and reminders that were helpful and interesting; but since "foul brood" legislation has been on the tapis our erstwhile good friend and mentor seems to write "standing on his head." Outbursts of petulance and innuendo do not make pleasant reading.

Realising the hopelessness of attempting to convince a man against his will, I did not intend to enter the lists against him in these columns, but in letter 5716 (December 15) there are statements which seem to call for some reply. Brother Woodley remarks that the present agitation for compulsory powers is raised by "a small party of bee-keepers—chiefly secretaries and experts." Now, I wonder who is most likely to know the condition of bee-keeping and its needs? The men who are in constant and intimate touch with individual bee-keepers throughout the county, or the man who, metaphorically speaking, never gets beyond the sight of the smoke of his own chimney? Common sense supplies the answer: The men who *do know* the crying need of the present day are those who are asking for a remedy to apply to the running ulcer; those who do not know, and will not know, are content to deery the efforts of others.

Mr. Woodley refers to the "chance majority of one" obtained at the last Berks B.K.A. Council meeting. He is a member of said Council and, knowing that the matter (apparently so vital to him) was the principal business before the meeting, he did not attend. I also am a member of that Council, and may without undue egotism claim to be the champion of the opponents of the "no legislation" party; and, though very unwell at the time, I went to Reading, and, as a result, the motion adverse to legislation was defeated by a "*chance* majority of one." So much for facts.

So far as I have been able to glean, the only tangible objections raised by the anti-legislation party are the fear that (1) the inspector may come to search for disease when all colonies are busy at work in supers; and (2) that such inspector may bring along disease germs "up his sleeve." Assuming that men, at least fairly intelli-

gent, would be appointed inspectors, it is little less than an insult to suggest that in their actions they would exhibit such a woeful lack of common intelligence. If Mr. Woodley only knew how monotonous it becomes to be, day after day, "going through" the hives of others, he would know that it takes a lot of enthusiasm and sense of duty to keep an expert up to concert pitch for any extended period, and that one's natural impulse would be to steer clear of the man owning colonies by the hundred rather than worry him by inopportune visits. While it cannot be denied that disease *may* have been spread by experts in past times when less was known of it than now, I fearlessly assert that, with ordinary precautions, the risk is very slight.

According to Mr. Woodley's dictum, it is only the large bee keepers who are "really practical men." Such should, then, be accounted great experts, and Mr. W. chief of them all; yet he says: "No expert has ever examined my hives." Now, really! one does not like to doubt his word, though I never thought him so negligent as that. Perchance that is why he never found the enemy at home in his apiary. But in charity it will be assumed that here, as elsewhere, our good friend does not mean just what he says. Whilst I grant to Mr. Woodley a good knowledge of bees and bee-keeping, yet out of his own mouth will I condemn him for his lack of knowledge in one phase thereof. He says (on page 493): "I have not been troubled with beepest," and on page 512 he tells us of the only case he has had to deal with; and on this slender experience he presumes to speak with authority on the needs of his county and the needs of bee-keeping generally. And then, after telling us, *ad nauseum*, that the Act is not needed, he calmly tells us he estimates the cost to Berks of working the Act at no less than £200 per year—it is going to take two men all their time to wipe out something that he would have us believe does not exist.

Brother Woodley: Going eastward from "Beedon" one goes down, and down; then, climbing up the other side of the valley the ridge is presently reached. And I want to tell you—though you may know it—that all along that ridge foul brood is very much in evidence. In justice to yourself and your customers, I willingly say that the hill I write of is too far away to be a direct menace to you at present; but just now there is nothing save good comradeship to prevent me from buying one of these diseased colonies and planting it within a stone's-throw of your apiaries. And if such a thing were done your boasted freedom from disease would probably be gone, and you would stand a big chance of having your hives reduced to a hundred or less. And then the maddest of mad scramblers for compulsory powers would be your own self. Better think it over again. Were I in your shoes I would rather have compulsory powers before than after such a happening. —H. EDWARDS, Sunningdale, Ascot, January 4.

BEE-KEEPERS AND VOTING PAPERS.

[5756.] I am very much surprised, more especially after the condemnation Mr. Saunders has justly received, that the vice-chairman of the B.B.K.A., who is also a member of the Committee dealing with the Bill, should place himself in such an untenable position as he has done by acting individually instead of in concert with the Committee in canvassing for the opinions of bee-keepers upon the Bill. Should he obtain any returns, they cannot be representative, because the two sentences, one of which is to be crossed out on the "voting" paper, are not "positive and negative"; they are two distinct points which need separate consideration. I am sure there are several bee-keepers in favour of legislation who are not in favour of the Bill as at present drafted.

Mr. Woodley was challenged, hence his action in advertising for bee-keepers to correspond with him. Mr. Weston was not, and in my opinion he has, by lack of the discretion we would expect from one holding his official position, run the risk of wrecking, by his injudicious independent action, the work which is now being done by the B.B.K.A. to promote legislation. He certainly implies by his letter (5742, page 6) that there is a lack of co-operation in the Committee, which I sincerely trust is not the case. I enclose my card and sign—FAIR PLAY, Westminster, S.W., January 6.

OPPOSITION TO LEGISLATION.

[5757.] Much of the opposition to the "Foul Brood Bill" seems to come from bee-keepers who are themselves qualified to detect and deal with the disease, and who object to interference at the hands of men, not their superiors, perhaps their inferiors, in expert knowledge.

Would not their opposition be disarmed if provision were made in the Bill for excepting from its action all hives belonging to, and under the personal care of, certificated experts?

Such a provision would save from "interference" the men whose qualifications are sufficient guarantee of the healthiness of their stocks, and still leave open to legislative inspection and control those whose ignorance and carelessness render some protective enactment imperative.—WILLIAM MUNRO, Chepstow, January 7.

[5758.] Having followed the above in your pages, as an interested bee-keeper I

cannot help coming to the conclusion that Mr. Woodley has yet to find any weighty argument against the Bill. In fact, some of his objections can only be the result of approaching the matter in, to say the least, a rather narrow-minded manner.

Mr. Woodley refers in his "notes" last week to the disease appearing within three miles of his own apiary. Perhaps he would not mind saying what his feelings would have been had his neighbour *refused* his expert advice?—E. PIDDUCK, Alsager, Cheshire, January 3.

[*A few other letters on foul brood legislation, already in type, will appear next week, after which date we hope the correspondence on that subject will be allowed to close for the present at least.*—EDS.]

WINTER LOSSES.

HOW THEY WERE QUICKLY MADE UP.

[5759.] Throughout the greater part of the United States of America there was a general complaint of the unusual loss of bees during last winter, and in this district it was very great. The frost and snow were very severe and lasted a long time, the bees being prevented from leaving their hives for months.

Mr. Mohler, a gentleman living at Folsom, a few miles from Philadelphia, had ten colonies in the fall of 1903, and only one survived the winter. This colony being very strong in bees, was left in two-storey eight-frame Langstroth hives with plenty of stores, headed by a young and prolific "golden-all-over" queen. As there was a late honey flow from fall flowers in the district, she continued to lay, and a quantity of brood was reared quite late in the autumn. They came through the winter in first-class condition, rearing a quantity of brood quite early. Wishing to increase the number of his colonies, and having combs from the nine he had lost, many of them having considerable quantity of honey in them, he consulted Mr. Pratt, obtained his pamphlet, and during the season made nine swarms and obtained nearly two hundred pounds of honey from them. I called on Mr. Mohler and had the above statement from his own lips.—JOHN M. HOOKER, Philadelphia, December.

WOOD ANTS.

[5760.] In reply to the inquiry of your correspondent "East Kent" (3640, page 9), may I say the ant he writes about is evidently "Formica rufa," which builds a nest composed of earth and bits of twigs in the shape of a mound, and often of considerable depth below the surface. This mound contains galleries and chambers, in which they bring their young to hatch during the heat of the day, carrying them down into the interior at night, or when the weather is too hot. If a nest is disturbed in spring—say, April or May—it will be found to contain many workers and a few females which have lived over the winter by hibernating. None of the males live over winter. When the colony is becoming very populous, males and females are born, and each of them have wings, but not so the workers. The males and females then fly off together for fertilisation purposes, after which the males die, and some of the females settle down to housekeeping on their own account, while others stray back to their original home. The females lay small eggs, which are well attended to by the workers until they hatch; by constantly licking them all over after hatching, the little worms cannot move, but have the instinct to lift up their heads and open their mouths so as to receive their sub sistence from the jaws of the nursing ants. This food is a secretion from the mouth glands of the nurses similar to the way in which nurse-bees secrete food for the grubs. When the larvæ have attained full growth they spin a cocoon—in fact, go through the same metamorphoses as bees, except that ants cannot bite their way out, but have to be assisted by the nurses. The fertilised females, which start a separate home, have all the work to do themselves until the young ants hatch, just the same as a queen wasp or humble-bee does in early spring. If your correspondent, "East Kent," would like to pursue the study of these interesting creatures further, I should be pleased to lend him books on the subject upon receipt of his address.—DARCY R. GRIMSHAW, Manston Apiary, Cross Gate, Leeds, January 6.

KENT BEE-KEEPERS' ASSOCIATION.

[5761.] Referring to the vacant secretaryship of the Kent B.K.A., I write to say that failing a more well-known bee-keeper, I should be pleased to act in that capacity; but must explain, however, that although taking a keen interest in the work, I am only a bee-keeper of three years' standing. Our honey-flow in 1904 was, as elsewhere, somewhat of a failure, and though I secured an average "take" by reason of having very strong stocks, yet am not at all pleased with its quality, my extracted honey being somewhat dark, and it refuses to granulate, in which state we like it best.

With regard to the controversy on name "foul brood" may I suggest "brood-pest," which would fit the case of brood only being attacked?—ARTHUR SCHOFIELD, A.R.C.A. (London), Keston, Kent.

Obituary.

MR. J. S. BALDWIN.

We deeply regret to announce the death, on December 30, of the above highly-esteemed bee-appliance manufacturer of Bromley, Kent. The sad news reached us from the family—soon after its receipt by cablegram—too late for insertion last week, and pending further particulars, which are to follow, we defer a more lengthy notice of our friend, the late well-known bee expert. It may be remembered that we inserted in our issue of September 15 last, a brief notice of Mr. Baldwin's departure for America on a visit to his sister, and we learn that he had already booked his passage home on steamer leaving New York on the 7th inst. His demise was therefore probably sudden and quite unexpected.

We are requested to say that the business will be carried on as usual at the old — and only — address, The Apiary, Bromley, Kent.

Queries and Replies.

[3644.] *Bee-keeping in India.*—I have sent you a small box by this mail containing a queen bee and six workers, and would be obliged if you would answer the following queries if the specimens reach you in a sound condition:—1. What variety of bees are those sent, and are they similar to those common in England? 2. Would it be feasible to import Italian or other strains of queens so far as this; and, if so, what strain would you recommend as best able to stand the long journey? 3. Would there be any difficulty in introducing such imported queens to the same kind of bees as specimens sent?

These bees are very largely kept by the villagers throughout the country here in round earthenware hives let into the walls of their houses. They give very fair yields of excellent honey.

A couple of years ago I made an effort to work them in English hives in movable frame hive on the "W. B. C." pattern, and although I had the help of your weekly and monthly papers, along with Cowan's "Guide Book," I made numerous failures through being absolutely ignorant of the subject to start with. I have at last got under way, I think, and have gone into winter quarters with six strong lots, but fancy that by introducing some good queens matters might be still further improved. I find great difficulty in getting them to take to section foundation. Is it probable that this bee is accustomed to a smaller cell? I send name, etc., and sign—BEES IN KASHMIR, Srinagar, India, December 5.

REPLY.—1. The bees sent are of a different race of the honey-bee to the English bee. The workers differ in appearance from the English bee in having the hairs on the underside of the head and thorax almost white (not tawny), and in having the underside of the abdomen paler and softer. In the queen the wings are slightly smoky, and the underside of the abdomen is black and hard. They are slightly smaller than English bees. In all these particulars they resemble closely the bee that occurs wild in the Eastern Himalayas, and is kept in hives at the jail, Darjeeling; no doubt they are of the same race.

A noteworthy feature about these bees is that in the hind wing a cubital nervure runs from the posterior end of the transcubital nervure in the direction of the tip of the wing. This nervure is absent in all the specimens of honey-bees in my collection from England, Italy, Malta, Abyssinia, and the Caucasus, but present in those from Darjeeling, Ceylon, and in *Apis indica*. It is also present in *Apis dorsata*, but absent in *A. florea*. 2. Yes; although you might lose some of the queens on the journey, bees have been sent as far or farther successfully. Italians would probably stand the long and hot journey better than the English race. The least risky way would be to import the queens in nuclei, with two or three combs, so that they could be attended to if necessary on the journey. 3. There might be some little difficulty in introducing the queens. A queen I brought from Darjeeling was killed by English bees to which she was introduced, but it does not follow that an English queen would be likely to be killed by Himalaya bees, as in this country Italian queens are easily introduced to black bees, while it is not so easy to introduce black queens to Italian bees. 4. Yes; the cells of the Darjeeling bees are 6-7th the width of those of English bees, and, if I remember rightly, a special small pattern of foundation is made for them.—F. W. L. S.

[3645.] *Dead Queen Cast Out.*—I am sending by post a dead queen which I found to-day on the alighting-board of my best stock. Being a nice mild day, and fearing disaster to the colony, I examined the hive and found it crammed with bees on ten frames, plenty of stores, and good patches of fine healthy sealed brood and unsealed larvæ on three centre combs, all of which indicated the presence of a prolific and vigorous queen. The bees were

too numerous for me to discern if there was another queen present; but I remembered having removed the three-year-old queen of the stock on August 1 last year, and the bees re-queened themselves at the heather. I also recalled to mind that when packing the hive for winter in October last I counted on the combs twenty-six used queen-cells. In view of all this I now propose leaving hive as it is until breeding begins about the middle of next month, and shall then, by examining for eggs and brood, be able to prove if there is still a queen in the hive. In the meantime I will be glad if you will reply in B.B.J. to the following queries: 1. Is it likely that there has been more than one queen living in this hive from last August up to now? 2. What is the probable cause of this queen's death? 3. What variety of bee is the dead queen? I bought the stock as Ligurians. 4. Do you approve of my suggestion to leave hive as it is for the time being? Thanking you for past advice, I send name for reference, and sign—W. H. H., Ipswich, January 3.

REPLY.—1. Though just possible, it is very unlikely indeed, under the circumstances named. 2. As there are no outward signs to indicate the cause of queen's death, we can only suggest that some disturbance among your hives may just possibly have caused a queen from one of your other hives to take flight and enter the hive in question in mistake for her own. This is, however, merely a possible explanation of the disaster, which a few weeks' hence will be easily cleared up. 3. Dead queen is a fine full-sized adult, and has every appearance of not having yet ceased breeding for the usual winter season. There is no trace of Ligurian markings on dead queen. 4. Your proposed method of dealing with the colony is the best you could follow.

[3646.] *A Beginner's Experience in Bee-driving.*—Early in September I went to drive two condemned skeps of bees at a place some disance away. On having the first one pointed out I got all ready, fixed the full skep and the empty one in proper position for driving, and began "tapping" the sides of lower skep as directed. After tapping for a while, and seeing no bees coming up, I thought something was wrong, so made an examination of the combs, only to find the skep empty save for a few robber bees! There was, however, a little honey, but not much. I then tackled the second skep, but made a preliminary inspection, and soon saw that there was in this case neither bees nor honey. Will you please say: 1. Why had the bees deserted both skeps? 2. I cut a sample of comb from first-named skep, and ask is there any disease in it? There was a third skep of bees and two stocks in frame-hive at same place, the skep being set up on the shelf of an old bee-shed. In this skep was evidently a strong stock of bees, for they had built combs on the under-side of shelf passing below through a chink in the floor. 3. Can you enlighten me as to the cause of this? 4. I would also be glad if you could inform me where I could get particulars of a bee-house to hold, say, fifty hives, as I contemplate making one if there is any advantage in so doing. I send full name, etc., and sign—H. S. K., York, December 20.

REPLY.—1. The skep had probably been robbed out, owing to queenlessness, and the bees have most likely joined the marauders. 2. No. 3. It is a common occurrence for strong stocks in skeps housed in bee-sheds to build combs under shelves if there are chinks through which they can get below to cluster. 4. We could send you a view of a large bee-house for 1½d. in stamps, but it has no detailed particulars for building contained in description.

Notices to Correspondents & Inquirers.

JOHN BROWN (Polyphant).—The Foul Brood Controversy.—Our limited space makes it impossible for us to occupy over two columns in replying to twenty-eight lines of Mr. Woodley's "Notes by the Way." We, therefore, hope that further correspondence on this subject will be—as much as possible—free from mere criticism of what has gone before. It can only lead to further retort and recrimination, which does no good to either side. An opportunity is now offered for individual bee-keepers to declare their views in a practical way by writing either to Mr. Weston or Mr. Woodley respectively, and we hope they will not fail to do so.

H. W. LAMB (Wolverhampton).—Shropshire Bee-keepers' Association.—The Hon. Sec. is Mr. S. Cartwright, Shawbury, Shrewsbury

CANDY (Yorks).—Sample of candy is not quite sufficiently boiled, and when the moisture evaporates it will become hard and useless to the bees as food. If taken to at once whilst moist the bees can consume it, but not if left long on the hive untouched. It should be stirred longer while cooling off to make the grain smooth and "buttery."

Honey Sample.

R. B. D. (Kendal).—The quality of sample is only very moderate, owing to an objectionable strong "tack" which we cannot account for, unless it is from privet. You could not jar the honey off in its present granulated form, so it would need to be heated till thin enough to run.

Editorial, Notices, &c.

IRISH BEE-KEEPERS' ASSOCIATION.

"Audi alteram partem."

(*Continued from page* 13.)

We find the I.B.K.A. constantly pegging away at the D.A.T.I., and asking for one thing and another, and at last the Department declines to recognise bee-keeping as a "technical subject," and refuses a grant to the Cork County Council, it being explained that such grants might be included in the scheme for "Agricultural Education."

Matters were in an unsatisfactory condition, and there was much dissatisfaction among the members of the Association, and we received numerous letters on the subject at the time, but as these affairs did not concern the bee-keepers of this country, we declined to be drawn into the controversy, judging it best to allow Irish bee-keepers to settle their disputes among themselves.

A special meeting of the Committee of the I.B.K.A. was held on March 25, 1902, and it was stated that the sec. and editor had started a company, which, it was thought, would injure the Association, as it really has done, and it was resolved "That a notice be inserted in the next number of the *Irish Bee Journal*, that at the general meeting on April 17 the members will be asked to take into consideration the position of the secretary and of the editor of the *Irish Bee Journal*, as promoters of the Irish Bee-keepers' Federation, Limited, without the sanction of the Committee."

At the same time the *Bee Journal* Committee do not appear to have approved of their editor's action, the latter having instructed the printers to pay no attention to the Committee, and deal only with him. In consequence of these high-handed proceedings, a series of stormy meetings was held, which resulted in the following resolution being passed: "The editor having disregarded the wishes and suggestions of the *Journal* Committee, the Rev. Mr. Digges be and is hereby discontinued as editor of the *Journal*, and is instructed to hand over, within three days, to the chairman of the *Journal* Committee (Mr. Gillies, 26, Hollybrook Road, Clontarf) all books, documents, etc." A further resolution was also passed for "the *Bee Journal* Committee to make arrangements for bringing out the May number of the *Journal*."

The Committee in question, consisting of Messrs. Gillies (chairman), Chenevix, O'Brien, Delap, and Dr. Traill, duly brought out the May number of the *I.B.J.*, and under the title we find the words, "Issued by the Irish Bee-keepers' Association." Mr. Digges, however, refused to be governed by the Committee, and was not to be over-ridden by it, for he also brought out a May number with the same title, which he styled "Organ of the Irish Bee-keepers' Association." We thus have the curious anomaly of two different editions of the *Irish Bee Journal* appearing for the same month, no doubt interesting from a bibliographical point of view, seeing that the *Journal* "Issued by the Irish Bee-keepers' Association" contains resolutions which are suppressed in the one edited by Mr. Digges. It was, however, evident that matters could not go on in this way, and the I.B.K.A., no doubt realising the difficulty, and wishing to rid itself of the incubus of a journal, passed a resolution, deciding that "the sole control and management of the *Journal* be taken over by Mr. Digges, the Association being freed from all responsibility, financial or otherwise." The *Journal* still remained the official organ of the Association. On the other hand, the Chairman of the *Journal* Committee, Mr. Gillies, started an independent paper called the *Bee-keeper*.

At the end of the first year of his proprietorship, Mr. Digges managed to obtain a subsidy from the Association of £10 for the *I.B.J.*, in addition to the sum of £15 8s. 9d. for advertising, yet he tells us in March, 1904, in his appeal for support, that "The work of the Association is not advertised."

The disputes did not end here; meeting after meeting was held, at which resolutions were passed only to be rescinded, and when the account for printing one thousand copies of the Committee's May *Journal* was presented, Mr. Digges protested, demanding the names of the gentlemen who had authorised it. It turned out that Messrs. Chenevix, Delap, and Gillies were responsible, and a resolution was passed requesting these gentlemen to pay the account.

At a meeting, held about this time, seven members of the Committee resigned; the vacancies thus created being filled by the remaining members electing their partisans. Then came the resignation by Lord Ross of the vice-presidentship, followed by that of Mr. Chenevix, and also of Sir Joselyn Gore-Booth, from the Committee.

Meantime, regardless of the rules, resolutions which practically re-constituted the Association were prepared and proposed by Mr. Digges, and carried by his friends at a special meeting held on October 23, 1902. The whole of the proceedings are sadly retrogressive, for, by the rules, affiliated Associations were practically disfranchised and excluded from representation on the Committee, because it was a condition that delegates should be resident in the districts they represented.

The Cork Bee-keepers' Association considered this last a "monstrous and arbitrary rule," and declared "that the I.B.K.A., after the adoption of such a

resolution, can no longer be looked upon as a national and representative institution." The Committee also obtained powers to suspend from membership any one they wished, and that no one should be admitted to membership except by approval of the Committee at an ordinary meeting. Another rule which placed the control of the Association in the hands of a few was that relating to voting by proxy. No wonder then that after such rules were adopted, there should be a falling off in membership, for those conversant with the facts could see that the Association was no longer representative of the bee-keepers of Ireland, but had become a close corporation.

Notwithstanding all this, we find in the following February number of the *I.B.J.* the editor seemingly full of enthusiasm at this achievement, and stating that the Association had "a total membership of nearly 300."

The time was now ripe for drastic measures, and at the next meeting of the Committee we learn that Messrs. Jas. A. Abbott and J. M. Gillies were removed from the Examining Board and from the roll of experts. Mr. Abbott is the well-known son of Mr. C. N. Abbott (who had done the pioneer work in Ireland for the British Bee-keepers' Association), and was a qualified expert of more than twenty years' standing, while Mr. Gillies was the senior member of the Examining Board, and their summary expulsion from the Irish Bee-keepers' Association was no doubt a great blow to its prestige. Moreover, in consequence of certain comments on the proceedings in the *Bee-keeper* the Committee passed a resolution declining to sit with these gentlemen, and postponed its next meeting for two months, appointing a sub-committee to carry on meanwhile. The ill-advised methods referred to hardly had the effect intended, for we find the Department of Agriculture appointing Mr. Gillies as lecturer in apiculture at the Government Agricultural College, Glasnevin, and the Royal College of Science, St. Stephen's Green, Dublin. He is also made examiner of candidates for instructorships under the D.A.T.I., Mr. Jas. A. Abbott being appointed instructor of bee-keeping for County Wicklow. These appointments appear to have aroused the editorial indignation of Mr. Digges, who says in the *I.B.J.*: "Wicklow has appointed an Englishman, and a Scotchman has been sent to the Department's Instruction Apiary in place of Mr. H. M. Read, hon. sec. I.B.K.A., *not* resigned. Irish bee-keepers had better keep a watch on such appointments for the next few months, for there are plenty of Irishmen capable of creditably filling them."

On the whole then it seems clear that the Department, realising the chronic state of discord in the Association, and attaching no value to its certificates, was very properly conducting its own examinations of proposed bee instructors, and had written to the hon. sec. of the I.B.K.A. objecting to examinations of candidates for experts' certificates being held at the "Model Farm" Apiary. Eventually the Department placed two stocks of bees at the disposal of the Association for examination purposes, thus showing its willingness to assist the industry, notwithstanding the treatment it was receiving.

The independent action of the Department was evidently more than those directing the affairs of the I.B.K.A. could put up with, so that they had a try in Parliament, Mr. Jasper Tully, Nationalist M.P., being induced to rise in the House of Commons and ask the Chief Secretary for Ireland "whether he could state on what grounds Mr. J. M. Gillies had been appointed lecturer in bee-keeping in Glasnevin and examiner of candidates for appointments as county instructors in bee-keeping; and whether, before making future appointments, the views of the Irish Bee-keepers' Association would be ascertained by the Department of Agriculture." In reply, Mr. Wyndham said: "Mr. Gillies was an expert on the subject. The Department would be happy to consider the claims of any candidate for such appointments which might be forwarded by the Association in question." Mr. Tully then asked "whether the right hon. gentleman was aware of the fact that the Bee-keepers' Association were of opinion that Mr. Gillies knew nothing about the subject—did he not come straight from the *Freeman's Journal?*" Mr. Wyndham, replying, said he "did not know where he came from, but he was an expert in bee-keeping."

The foregoing question and answer appeared in the *Bee-keeper*, as, for obvious reasons, they are not given in the *I.B.J.*

This was not sufficient, for the I.B.K.A. could not get over the dismissal of its secretary, and the appointment of experts it had expelled, so that when the vote for the Department came up for consideration in the House of Commons on August 5, 1903, we find in the *I.B.J.* that Mr. J. Murphy (Nationalist M.P. for East Kerry and Sec. United Irish League), "regarding appointments by the Department, complained that favouritism was shown." The Attorney-General for Ireland replied: "As to the suggestion that 'no Irish need apply' for appointment under the Department, all he could say was that it was entirely erroneous. There was the greatest desire on the part of the Department to employ Irishmen wherever possible, but, of course, their first duty was to employ persons whom they believed to be most competent to teach what they desired to

have taught, and if they could not find them in Ireland, they had been compelled to appoint persons from England or Scotland."

Comment is not needed, but the foregoing replies—which have appeared in some of the daily papers, as well as those we have mentioned—give some idea of the value placed upon the Association's certificates by the Department.

The Cork County Council also appointed Mr. Blemens as Instructor of Horticulture and Bee-keeping, after his having been examined by the D.A.T.I. To be so persistently ignored was too much for the executive of the I.B.K.A., and "the secretary was instructed to write to the Department inquiring who had examined Mr. Blemens in bee-keeping?"

In July, 1903, we again find the editor of the *I.B.J.* adversely criticising the Department. He says the Association had "on its examining board some of the best qualified experts in Ireland," also that it "had the experience of nearly a quarter of a century in the highly technical work of examining in bee-keeping, and it offered its services in this respect to the Department free of charge." Then, he adds, "For some unexplained reason the Department, with an ill-grace which had to the average Irishman a distinctly foreign accent, refused the well-intended offer of the Association; removed the Association's hon. secretary from the scarcely remunerative office which he held under the Department; and started upon a bee-keeping venture of its own."

The Department seems to have known what it was about in giving appointments, and declined to be influenced by the I.B.K.A. It had formulated and was working a scheme of its own; it was holding its own examinations and prepared to appoint competent instructors to county committees, and pay them £2 a week, giving them power to deal with diseases, and report progress to the Department; but it firmly ignored the certificates of the I.B.K.A.

Out of the large number of instructors appointed under this scheme, only a few hold the certificates mentioned, notwithstanding persistent endeavours to have official recognition of them. As a matter of fact, the few who do hold certificates got their appointments entirely by recommendation of the county committees. The Department also, in 1903, as part of its instruction to instructors, sent a dozen bee-keepers, under the guidance of Professor Houston, of the Royal College of Science, Dublin, on an educational tour to England, showing unmistakably its determination to carry on its work of instruction without any interference from the Association.

(*Continued next week.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

BANNING BLACK BEES.

[5762.] "Natives have several faults, apart from a rather bad temper. They are not sufficiently prolific, and do not store so late in the season as do Italians. But beyond all, they are helpless in the face of foul brood, and will not work with their owner when he attempts to cure the malady."

Here we have four counts in an indictment against our native bee, and I wish to traverse every one of the four, as my experience leads me to differ in the conclusions arrived at by the writer of the above extract, who is an extensive bee-keeper of over thirty years' experience. His words generally deserve to be carefully weighed, but here, when put to the test, they, in my opinion, are found wanting. After a by no means limited experience of over twenty years, I utterly deny that his first indictment—*bad temper*—has any foundation in fact. I have met in with Carniolans, that much-vaunted pacific bee, with as vicious a temper as ever I experienced in any of the black race; Italians can at times exhibit as much spleen as the native, albeit they are as a rule peaceful and gentle; while hybrids are, in the proportion of 90 per cent., far crosser than the maligned blacks.

On the second count—*not sufficiently prolific*—I dissent, but mildly. I grant at once they are not so prolific in the height of the season as the best specimens of Italians. But give me my choice of, say, fifty queens of either race, unselected, and I have no hesitation in saying that I would vote for the natives. Though many yellow queens sent out by our dealers do really magnificent work, the percentage of such is small. We hear of the few record makers and record breakers, but the failures sink into oblivion.

In regard to count number three—that they do not store so late in the season as Italians—I enter a caveat. My experience diametrically differs from that of the writer, and his and my findings are wide as the poles asunder. Curiously, I get something like confirmatory evidence in

favour of my view from his own words, because on another page he writes: "Strange to say, natives do best early in the season." In my view, this true statement is *prima facie* evidence that they would do well *late* in the season, and I know this is the fact, as here at least, they remain tenaciously in the supers after the foreigners forsake them for the warmer precincts of the brood body. The natives take readier to supers, remain longer aloft, build comb later in the season, and work in sections with a comparatively smaller force of bees to draw upon.

But the fourth indictment appears to me inexplicable. Read it again and again! It deserves to be ingrained on your mental retina. Remember the words are written by an extensive bee-keeper of over thirty years' experience, who has a profound knowledge of bees, and whose substantive statements I generally hold in the highest respect. The Styx lies between us here, and a region divides us wide as that which separates the Arctic and Antarctic. Of all the cases of foul brood I have ever encountered, nine out of ten, I think, were directly traceable to the foreign element, and I almost subscribe to the sentiment expressed by a prominent contributor to our pages some years ago when he wrote: "Since we began importing we have had foul brood; before we began importing *we had it not*." To the statement that natives are "helpless" in the face of this dire disease I absolutely demur. It generally, on the contrary, takes from two to four times as long to kill out a black lot as it does an Italian colony. The latter, frequently in a single season, assumes it in the form of a "galloping consumption." If it catches the infection one season in a mild form, the very prolificness of the queen proves its undoing, because each contaminated occupied cell becomes a centre of contagion, disseminating the spores over the surrounding area, until no single egg laid by the queen results in a metamorphosis evolving a bee fit to take on its shoulders the active duties of a healthy existence.

That the native bees "will not work with their owner" is a proposition which has not been proved. I know they will. Treated on the starvation plan, they reciprocate any after kindness on their owner's part, and rise to the occasion by building comb at a rapid rate, if the population is fairly numerous, even late in the season, whereas Italians at that date are utterly helpless, and seem to lose all heart and energy. When fed with medicated syrup, I never heard of blacks not working as well as the other race. Present in a mild form, they, if populous, keep the disease at bay as well as any other class of bees.—D. M. M., Banff.

MY NEW START WITH BEES.

SOME SUGGESTIVE EXPERIENCES.

[5763.] On again taking up the B.B.J. I was pleased to see that steps are still being taken to secure legislation with regard to foul brood.

At the beginning of 1903 I sold off my bees and appliances and returned to town life. At the end of the year my health completely broke down and so I returned here. With outdoor life I was soon as well as ever, and as "bee fever" has never left me, my first desire was to establish another apiary.

During last summer I built hives, and in the autumn "went for" driven bees. Here's my experience (I am afraid it is not exceptional):—I commenced inquiring for bees early in the year. At one place I was told that all their bees had died out, but if I wanted bees, the best way was to do as they were doing; put some empty butts (local name for skeps) in my garden and swarms would soon come. On stating that such a proceeding was tantamount to robbing one's neighbours, I was told that I should not get on in the world if I was as particular as that. Looking at one of these decoy skeps, I found it full of dirty, mouldy, old combs, and what I should say were unmistakable signs of having had foul brood. I did not and do not feel any the happier to know that my bees will have the chance of visiting that skep.

At another place, applied to in the autumn, I was told I could have the bees. They would be glad to have some honey. Nothing had been done to the bees since the husband died two years ago. They liked honey, but the bees did not like them. "None of they dari go anist them." There were five skeps. Of these I found two with nothing but dirty, mouldy, old combs, and evident signs of the bees having perished with foul brood. The third had a few bees in it, but when I turned it up, my nose (not a very sensitive one) told me what was the matter. I advised a bonfire being made of the whole lot. I may state that neither of these bee-keepers had ever heard of foul brood.

I knew foul brood existed in this neighbourhood, but as I had taken, literally, the advice of the "Guide Book" and B.B.J., and always treated my bees as if they had the disease, I managed to keep it away. Prevention is always, to me, better than cure.

Previous to finding bees kept in this state, I had not thought of joining any association. I rather like to "paddle my own canoe." I have always kept my bees with profit, as well as pleasure, and I do not know that I want the expert's visit (shall not be at all offended if he never comes), but I find others do, so I have

joined the Cornwall B.K.A., and shall make it my business to try to induce others to do the same.

This leads me to the discussion now going on in your pages about the proposed Foul Brood Bill, and on that point I consider that legislation will protect my bees from careless and ignorant bee-keepers, and for that reason I hold up both hands for the Bill.

I see that "dear old bogey," liberty of the subject, is to be trotted out again. Liberty of the subject!!! Licence should be inserted instead of liberty. Anyway, my bees, home, and all my belongings will always be open to authorised inspection. It would be welcomed. If I am wrong, inspection will put me right and so protect others; if others are wrong, it will put them right and so protect me.

Good luck to the Foul Brood Bill, and a happy and prosperous year to each and all of its promoters.

It occurs to me that this will be of no interest, so put it in the w.p.b. It is written and I am going to inflict it on you in spite of dear "Lordswood's" advice to "spare the editors."—S. HARBORNE, Treen, Cornwall, January 11.

A BEE-KEEPER'S TROUBLES.

CURING FOUL BROOD.

[5764.] I have been waiting for a chance to write to B.B.J., thinking you would like to know how I got on with my trouble connected with the thirty stocks of diseased bees I bought, as stated on page 144 of B.B.J. last year. The advice you so readily gave me at the time I appreciated very much. I should have written sooner, but my time is very fully occupied, and my unfortunate bee speculation turning out as it did made me a lot of extra work.

In giving you results of work done by the expert (Mr. W. Loveday), I may say we started, in good bee weather, on my own five stocks, leaving the thirty diseased hives till the last. As it turned out, nothing was gained by this, as they were all more or less diseased. Of the thirty lots I bought, only two proved to be healthy; the other twenty-eight lots were badly diseased. Mr. Loveday's first idea was to make a bonfire of the whole lot! But in view of the great number of bees to be destroyed, he eventually decided to try to save them on the starvation plan. So we set to work at once getting the bees off the combs, but it was quite a big job to go through so many, I assure you. We stuck to it, however, and then set to work, selected the best of the hives for disinfection, leaving the others to be burnt. A painter's blow-lamp was obtained, and the insides of hives thoroughly well scorched with it. We next gave the hives a good washing and scrubbing, out and in, with hot water and soda, then left them to dry ready for use. We then tackled the new frames, fitting them with full sheets of foundation, ready to receive the bees. This being done, and the bees joined up in suitably strong lots, they were put on combs and fed with medicated syrup, prepared according to recipe in "Guide Book." This completed the work undertaken by Mr. Loveday, assisted by myself.

My first task of any importance after being left to my own resources, was to find out if the hives were provided with laying queens. I was not long in ascertaining that the two stocks made up from my own five lots of bees were queenless. On my telling this bit of bad luck to a bee-keeping friend, he offered me a queen from his apiary. I thanked him, and asked him the price. He replied: "You have lost enough already," and hoped I would accept the queen as a present. This I did, and was also very grateful to him for other valuable help freely rendered me in a time of great need.

I now turn to the bright side of my case. When Mr. Loveday first came to my place I had thirty-five lots of bees; when his work was completed he left me with eleven lots. Two of these proved queenless, and after uniting and giving them the queen mentioned above, I had ten lots to start the year with. From these I had five swarms, two of which I returned, and three were set up as new colonies, making my number thirteen in all at the end of last season. From these I have also taken 370lb. of surplus honey. I need hardly say that this little "take" is very satisfactory to me, after what the bees have been through. I may also say that up to the time my last examination of the hives was made I could not see any trace whatever of disease, and trust that when spring comes round I shall still find them healthy, although I am somewhat doubtful on the point, for last October, in weather when bees should in the ordinary course have been quiet, I had occasion to pass by my hives, and I found the bees very busy, and I wondered what was the matter. I watched, and found them going straight for the hives of a neighbour. I was at a loss what to do, for the neighbour referred to is the reverse of neighbourly, if you can understand what that means. I therefore tried to locate the robbers among my own bees, and soon discovered that three lots were engaged in the business. These hives I marked, and they will have special attention in the early spring. I only hope the hives being robbed were not diseased. Mr. Loveday will remember that when he was here I went to see this neighbour with a view to seeing her bees, but she refused to allow either

myself or Mr. Loveday to examine them at all, stating that they were all right, and she was not going to have her bees upset by any one. When I mention that the hives stand on the very ground from which I got the thirty diseased lots that caused me so much trouble and expense, it seems cruel that one should be treated in this way. I think, if Mr. Woodley and others, who are using their influence against foul brood legislation, were to have similar trouble to mine, they would be the first to welcome legislation. — A. WALLER, Great Chishall, January 12.

NOTES AND EXPERIENCES OF 1904.

BY A BEE-KEEPING SCHOOLMASTER.

[5765.] *Swarming.*—Having felt for some years past that bee-keeping loses much of its charm unless the bees are allowed to swarm occasionally, I decided early last year to allow seven of my colonies to swarm, and to hive the swarms on the old stands. Consequently the seven were not supered, as the others were, when ready. The result was, on entering the apiary on Saturday, June 18, I found a large swarm clustered round a fencing post. There was no outward evidence of the hive it came from, so I at once got the swarm into a hiving skep, and set it down a few yards away, hiding the skep completely from view. Returning to the clustering place, I covered the few remaining bees with flour, in order to locate their late home, but this plan failing, I had to examine, and, after finding the right one, I placed the swarm on its stand, leaving the old stock by the side. Seven days later the parent stock was removed to a new stand some distance away, and no cast issued.

On June 23 the next swarm—which also issued unseen—was found clustering on the branch of a thorn. Determining to do better this time when hiving the swarm, I placed a handful of the bees into a basin, with a tablespoonful of flour, and covered them with perforated zinc. I then carried the swarm still further away, concealing it out of sight. This done, I released the prisoners—floured like proverbial "millers." This time I went straight to the hidden skep, and in less than a minute the floured bees began to reach the same spot in numbers! Not to be beaten, I again removed the skep further away, with the same result. I then carried it over fifty yards in another direction, placing it by the side of a running stream, near a miniature cascade, thinking that the noise of the water might assist me. I was not disappointed, for though the buzz of the scouts was heard over my head, they failed to hear the answering notes, so in about fifteen minutes I proceeded to the apiary, and I found the flight-board of one hive covered with fanning "millers," and easily showing the swarmed hive. I had nine swarms altogether. The swarms that came off unseen were all treated similarly to the last one named above, and the same noisy spot by the running stream did the "locating," every time with success, and the old hives being removed as before, no casts issued. All the swarms were hived on six frames of drawn-out comb, with four frames of wired foundation.

Swarm Prevention.—With seven other colonies I tried to prevent swarming, by allowing the first super of shallow-frames for brood-rearing, in addition to body-box, and giving each super ten shallow-frames of drawn-out worker comb. This succeeded in raising immense populations and preventing swarming, but was a total failure as regards the gathering of surplus on the following points:—(1) The large amount of brood raised kept far too many bees at home, and all the honey gathered was used up in feeding the brood. (2) The queens ceased laying early, being exhausted by their maternal efforts earlier on. (3) My seventy clean extracting combs being completely ruined by the number of pollen-clogged cells, were regretfully consigned to the melting-pot!

Stocking Observatory Hive.—Having one stock with an aged queen, whose progeny I wished to perpetuate, I selected it to stock a Lee's three-frame observatory hive, thinking to allow the remainder to raise a queen for themselves. A fine day in June was selected, and half a dozen budding experts (aged from ten to fourteen years) assisted in the operation. In examining the combs, the queen was soon spotted by a precocious youngster.

Having chosen three suitable frames, and placed them with the adhering bees and queen in the observatory hive, a number of young bees were added to make up for probable loss caused by the old bees returning to their old home. The observatory hive was then placed in its old position in the school window. We had only just completed our job when it commenced to rain, and for nine succeeding days the bees were unable to take wing, owing to the bad weather. This, along with the overcrowded state of the hive, brought on dysentery, and the observatory hive became an illustrated object-lesson, teaching the direful results of this disease, that will long be remembered by those who saw it.

The first fine day found us again busy in returning the suffering occupants to their old home in the apiary, where they united peacefully with their old comrades.

Surplus.—The remainder of my stocks were worked for extracted honey, each

hive having excluder zinc on top of the ten-frame brood-nest. The supers were filled with eight of Lee's wide shallow-frames, full of clean drawn-out drone comb, and they gathered on an average about 50 lb. each. The two hives manipulated in stocking the observatory hive gathered no surplus, but had their ten combs, at the end of the season, filled almost to the very bottom with honey.

(Conclusion in our next.)

IMPORTED HONEY PERILS.

[5766.] Referring to "County Councillor's Views" (5753) and my previous communication, I have no desire to make much of the perils of imported honey. Bees, however, do not always wait until sweets are offered to them, and the distribution over the country of the annual £25,000 worth of honey can hardly fail to offer them opportunities, not to mention that such honey may sometimes be fed to them by benevolent and ill-instructed bee-keepers.

Putting the danger of communicating disease by this means and by the introduction through responsible dealers of young foreign queens as being of about the same importance, I should deem it a decided mistake to load the Bee-pest Bill with prohibitory provisions for either of them; the more so that an embargo on foreign queens, or their quarantine if admitted, would be outside the working powers of the authorities at present designated, the County Councils.—H. J. O. WALKER (Lieut.-Colonel), Lee Ford, Budleigh Salterton, Devon.

FOREIGN HONEY AS BEE FOOD.

[5767.] I think your correspondent, "County Councillor," conveys a wrong idea when he says, on page 16, "honey is not used for bees." I have, myself, known foreign honey to be used for the purpose of feeding bees, because it was thought to be cheap, and the natural and proper food for them. Apart from the fact that disease germs may be imported and introduced to stocks by this method of feeding, foreign honey often contains glucose, and may have a very deleterious effect upon the health of the bees if given as food. I say this because, in the manufacture of glucose, sulphuric acid is used, and it is often found in analysing glucose that sulphates are present, which are injurious to bee life.

It is to be regretted that a few of the bee-keepers who object to foul brood legislation, should try to impress upon the readers of B.B.J. that experts as a body are a most careless lot of individuals in the manipulation of hives. Because an isolated case of carelessness has been discovered at some time, it does not necessarily follow that all visiting experts belong to the same school. Those with whom I have come in contact have always been most strenuous in their efforts to prevent the infection of healthy stocks by properly disinfecting and sterilising what has touched a hive or its contents when disease was present.

Only those who have explored the country and seen foul brood rife in the incipient and advanced stages in so many districts, and its detrimental effect upon bees and bee-keepers through improper treatment, know how much could be done by the compulsory destruction of disease in its virulent form. Very often the antipathy to experts examining stocks is due to the fact that they will discover something in the management of the apiary that has caused the apiarist to be so cryptic and to dread exposure. Wishing all bee-keepers a very successful year.—A. W. SALMON, Cashfield House, Sewardstone, Chingford.

THE SEASON IN ROSS-SHIRE.

SOME NOTES ON "FRAMES," ETC.

[5768.] While 1904 has proved a disappointing season to many, we Northern bee-men have nothing to complain of. The honey-crop and the price obtained for it are alike excellent. Such a satisfactory combination is rather unusual; the explanation, a very simple one, is to be found in the surprising extent to which apiaries have shrunk as a result of the bad seasons.

For instance, a bee-keeper down at Cononbridge, who formerly worked close on forty stocks, had them reduced this season to four. The four yielded an average of 90 sections, one hive giving 120 completed sections. With good sections selling at 10s. per dozen, such yields give a satisfactory answer to the query—Do bees pay?

Bee-men having the fortune, or misfortune, to be situated on heathland may envy, but cannot share in the joy of those located in purely white-clover districts. August was a most unfavourable month, what with rain, frost, and an almost continual low temperature, a trio that quickly knocked on the head any expectations that as a honey season 1904 would equal or surpass the record year, 1899.

This failure of the heather crop seems to have become chronic; year after year, with depressing monotony, September finds the moor-man with light supers and a heavy heart. Even the outer brood-frames, blocked with the precious nectar, at which we used to grumble, are now a thing of the past, which means feeding,

more especially where clover-honey was all put into the supers.

Large Frames and Tall Sections.—The larger frame and tall sections, as subjects for exciting debate, have of late been lost sight of in the discussion centering around the proposed Foul Brood Bill. Although at present, like the bees, hibernating, it is to be hoped that the old friends named above and their respective champions may yet contribute some stirring pages to the B.B.J.

During the past season I noticed some bee-keepers writing our Editors to the effect that, in their experience, large-frame colonies filled their brood-frames with honey, but refused to put any in the supers, the natural inference being that, from the bee-keeper's point of view, large brood-frames were best left severely alone. In my opinion requeening is about the best remedy for brood-nest storage. A prolific queen will take care of the largest brood-frame going; consequently the honey must go into the supers. Personally my experience of large frames is limited to a single colony, which last season did better than those I have on standard frames. An unpleasant feature of last spring was the rapidity with which seemingly strong stocks dwindled away to mere shadows of their former selves. The large-frame colony was no exception. Closed down on twelve frames, April showed bees on six only, and when on the closing days of May, the bees barely covered four frames, the outlook as regards surplus-honey was, to put it mildly, somewhat indefinite. Yet, such was the prolificness of the queen that June was a month of rapid progress, and by July 1 ten frames were filled with brood—filled from side to side, and right up to top-bar. On the following day a shallow-frame super was given with partly worked combs, mementoes of 1903. Little was done, however, as the stock was not yet strong enough to occupy surplus room. About ten days later a second super was placed under the first. Then, all at once, the hive overflowed with bees, and more room had to be given, so that by the end of the month four shallow-frame supers and a rack of sections were full of bees, and the brood-chamber still overflowing. The honey was all left on the hive until August 12, and then removed intact. Being busy throughout the day, I had to tackle the job after 10 p.m., and it was about the warmest time I remember having. The enraged bees were everywhere—on the ground, in the air, running over the supers, and—well, perhaps a few of them missed the consolation of having revenge on the nocturnal despoiler. However, next day, the pleasure of removing 130 lb. of honey dispelled the painful memories of the previous night. An examination at this time showed brood on every one of the ten frames.

One super with built-out combs was left on the hive and removed early in September—no difficult task, for so bad was the weather that this powerful stock gathered less than 15 lb. of heather honey. Considering that it was backward at the start, and had to build all its store combs, the large frame colony has done fairly well; but what I want to point out is the fact that the queen was cramped below, for I found brood in three of the four shallow-frame supers.

Query: If ten "Quinby" frames are not enough for a good queen, how could the same number of standards be expected to afford sufficient scope for her laying powers?—J. M. Ellis, Ussie Valley, N.B., January 16.

A JANUARY EXPERIENCE.

[5769.] Eleven days ago, i.e., on the evening of January 5, a skep of bees which I had bought from an old bee-keeper reached me in rather bad condition, for to my surprise honey was running from the sacking which kept the bees in. Next morning I unpacked my purchase, and found the combs all broken down and smashed. A great many of the bees were drowned in the running honey, while the rest had crawled to top of the skep and clustered there. After removing combs and dead bees, I put the skep on a stand and got ready a box of shallow-frames with built-out combs, on to which I transferred the bees, and fed them with honey from the smashed combs. They took this down so readily that several of the frames of comb are sealed over, and the bees are now going on first rate, and seem as if they would winter all right. I should like to know if any B.B.J. reader had a similar experience in the month of January? I send name for reference, and sign—W. D. T. R., Kingswinford, January 16.

CRACKED HONEY JARS.

[5770.] I notice in issue of January 5 (3641, p. 10) an inquiry as to glass jars cracking after honey has granulated. I think there may be another possible explanation than improper handling of jars, as the following may show:—About four years ago I was asked if I could say why a vessel containing honey had cracked? In this case it was a new, glazed, earthenware "cream pipkin," containing forty or more pounds of honey, and nearly the whole of one side could be lifted away, leaving the honey (granulated) exposed. In 1902, I filled a twenty-eight-pound tin with liquid honey, the tin being perfectly sound at the time, but the joint was sim-

ply soldered. The honey had granulated, and wishing "to jar it off" later in the year, I picked up the tin, intending to immerse it in a boiler in order to reliquefy the honey, but I noticed that the joint was broken and separated about three-eighths of an inch. There was also a perceptible bulge in the tin. Again, last summer, while "touring" in Essex, I was shown a number of jars of granulated honey, the greater part of them cracked or broken. In none of these cases had the vessels been handled after the liquid honey had been put in them. The explanation seems to be that in granulating the honey expands and thus cracks or breaks the vessel containing it.—J. HERROD, Trentside Apiary, Sutton-on-Trent, January 14.

OWNERS' RISK RATES.

[5771.] I enclose a letter sent to Messrs. Gayton and Hare, solicitors, Much Hadham, from the Great Eastern Railway, in reference to a claim I asked them to make on my behalf, for sections damaged in transit. The publication of the letter might be of interest to your readers, some of whom might be able to say how far the company's solicitors are right.—H. NEWMAN, The Parsonage, Brent Pelham, Huntingford, Herts, January 6.

[COPY.]

Great Eastern Railway
Solicitors' Office,
Liverpool Street Station,
London, E.C.,
December 21, 1904.

RE NEWMAN.

DEAR SIRS,—Your letter of the 19th inst., addressed to Mr. Drury, has been handed to me.

I would point out that the owners' risk note in the company's possession protects them against all claims unless such damage was caused by wilful misconduct on the part of the company's servants.

I have looked into the facts of the case, and can see no liability attaching to the company, and therefore am unable to entertain you client's claim.—Yours truly,

for E. MOORE,
(Signed) R. M. Nettleship.

Messrs. Gayton and Hare,
Much Hadham, Herts.

BEES AND HAZEL CATKINS.

[5772.] Your correspondent, "J. R., St. Albans," promised some time ago to help me in coming to a right conclusion with regard to bees gathering pollen from the catkins of the hazel, if I would raise the question in February, 1905. I, therefore, now repeat what I said last year, i.e., that bees do not gather pollen from the above-named source, nor visit the hazel catkin at all. On page 125 of last year's B.B.J., "J. R." says he saw a clump of nut-boughs covered by bees, and "A Lover of Bees," on page 155, says he "has seen thousands of bees working on the catkins in some seasons." I, myself, assert that your correspondents are mistaken and hope to prove this.

Also, "J. R.," on page 183, quotes Mr. Cheshire's well-known work on bees as confirming his own view, but if Mr. Cheshire says that bees collect pollen from the hazel, he, too, made a big mistake, and it now remains for his friends to prove they do, by personal observation—aided, if possible, by photos—but not otherwise.—JAS. SKINNER, Bristol, January 12.

*** We are sorry to find that notwithstanding the notification on page 11 last week, regarding a pressing need for closing the discussion on foul brood legislation, letters bearing on the subject seem to come in more numerously than ever. It is not going beyond the mark to say we have enough MSS. on hand to fill about twenty columns of the B.B.J., and as a great portion is from readers who have already expressed their views very fully, it should surely be clear that mere reiteration of arguments already used can serve no useful purpose, on one side or the other. Besides, the next meeting of the Committee appointed to deal with the matter will be held before these lines are in print, and it is to be hoped that some notification will be made in view of what has already been said for and against in our columns, along with some probable expression of opinion by those who have availed themselves of the voting papers mentioned in our pages.—[EDS.]

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of December, 1904, was £1,422.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

HONEY IMPORTS, 1904.

		£
January	value	161
February	,,	2,352
March	,,	3,113
April	,,	3,575
May	,,	5,039
June	,,	3,937
July	,,	4,652
August	,,	2,250
September	,,	1,462
October	,,	506
November	,,	658
December	,,	1,422
Total	value	£29,127

Queries and Replies.

[3647.] *Transferring from Hive with Fixed Floor.*—Many thanks for reply to my query (3638, page 9). The hive is, as you suggest, a "combination," and has a fixed floor. I can, therefore, well understand that it would be a difficult task to transfer combs from this hive to another; but it struck me that perhaps the best way would be to drive the bees into a new hive and treat as a swarm. But I hardly know how to proceed, as it seems much more difficult to get the bees from a hive like this than from an ordinary straw skep. Perhaps you will be good enough to tell me if what I suggest is the best way of transferring them, and what month would be the best. I sign, as before—NOVICA, St. Albans, January 13.

REPLY.—We remember undertaking a similar task for a friend several years ago—in our busy bee-days—and shall not forget it, from the fact of having to operate at a time when most of the cross-built combs were occupied with brood in all stages. However, the job was got through with little damage, but it is not too much to say that a less experienced man would have had a poor chance of making it a success. The cross-built combs were, in our case, fortunately almost entirely free from brace-combs projecting beyond the frames to the hive sides; this helped us considerably, as the few attachments could be severed from above. This done, the space above top-bars of hive (a legless one) was packed with spare quilts till level with the sides of hive, and the latter was then gently turned over on to a table. The hive was then carefully lifted off, leaving the frames and combs standing *en masse* bottom upwards. We then began at one end, and by dint of carving and slicing, the combs were cut away and cleared of bees (the latter being run into an empty skep) one by one and carried into a warm room so as to avoid chilling the brood. Then, with the help of tapes, laths, and corks, the combs were tied into frames as each one of the latter was parted from the bulk. Meantime, my friend was cleaning and preparing the hive, which was set on its old stand; and when four frames were filled with comb they were hung in the hive and the bees thrown out in front and allowed to run in. This they readily did, and clustered on the brood nicely while the remainder of combs were being dealt with. We need hardly say that great care was taken not to bruise the cappings of sealed brood in handling the combs, and it was necessary for rapid working to have a helper to keep the bees well subdued by judicious smoking. If you can adapt the above details to your own case, and are aided by some one used to bee-work, all may go on well, but you must judge for yourself as to this.

[3648.] *Bee-keeping in Jamaica.*—In a Government pamphlet on the West Indies, it states that there is an opening for bee-farming, and that one with practically no previous knowledge of bees could start *one hundred* hives, with a little assistance from a bee-man on the spot.

I wrote lately to one of the Government agricultural instructors there asking many questions, and am now awaiting his reply.

As a tropical climate is not much to my liking, I addressed myself to Mr. Tickner Edwardes, and he very kindly has given me useful information regarding bee-farming in this country. He was unable to say anything about the West Indies, but mentioned that you might be able to give some information.

One hundred hives seems a large order to start with, in my estimation, but no doubt whoever wrote the article knows the conditions obtaining in the West Indies. I, therefore, ask:—1. If in your opinion he goes beyond possibilities, and could an absolute novice amongst bees start, say, fifty hives out there after having a few months' experience in this country? If you can give me some information on the subject I shall feel much obliged. 2. Could you also mention any bee-farm of up-to-date methods where they would take on a learner as a boarder? I send name, etc., for reference, and sign—INQUIRER, Edinburgh, January 10.

REPLY.—1. It is difficult to say what is possible after a few months' experience of practical work on a large apiary under a capable teacher; but our advice is to get the experience first and then consult with your teacher, who should be better able to judge of your qualifications than any outsider like ourselves. On the other hand, we should—to use a homely adage—"go slow" with regard to investing capital in a West Indian bee-farm without making full inquiry as to a profitable market being available for the output of the farm at a paying price. It should also be borne in mind that it would not do, in our opinion, to have to engage a "bee-expert" at once to do all the work. The bee-farmer himself would need to labour hard and put up, maybe, with the help of an able-bodied native—at a small wage—who did not fear the bees or their stings. 2. The most suitable and best-equipped bee-farm we know of for training students in bee-keeping is that of Messrs. Herrod and Stewart, Old Bedford Road, Luton, Beds.

*** *Some replies to Queries, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Wednesday, January 18, at 105, Jermyn Street, S.W., Mr. T. I. Weston occupying the chair. There were also present Dr. Elliott, Messrs. D. W. Bishop-Ackerman, T. Bevan, W. Broughton Carr, J. B. Lamb, W. F. Reid, F. W. L. Sladen, E. Walker, F. B. White, W. Woodley, and the secretary. Letters apologising for inability to attend were read from Mr. T. W. Cowan, Miss Gayton, Mr. W. H. Harris, and Mr. E. D. Till.

The minutes of the previous meeting were read and confirmed.

Two new members were elected, viz., Miss H. M. James, Piddington Grange, Northampton, and Mr. F. J. Osborne Smith, 65, Frithville Gardens, W.

The report of the Finance Committee presented by Mr. Weston gave particulars of receipts and expenditure to date, and was duly approved. Cheques asked for by the Committee were passed.

It was resolved that for the purpose of honey exhibits at the R.A.S.E. Show, to be held at Park Royal in June next, the counties be formed into two groups only, viz., North and South, the dividing line to reach from the mouth of the River Severn to the Wash. Additional open classes for shallow-frames of comb honey, and for six jars of heather honey, have been added, and the secretary was instructed to submit the proposals for acceptance by the Council of the Royal Agricultural Society of England.

The full report of examiners of candidates for second-class expert certificates was received, and as a result the Council decided to issue diplomas in favour of the following twelve candidates, viz., Mesdames Pittis, M. R. Hammond, D. Sillar, and T. Waterhouse; Messrs. G. W. Avery, A. Cameron, J. D. Hay, J. Gray, Thos. Johnson, J. Price, L. E. Snelgrove, and J. N. Tinsley. The remaining twenty-one candidates unfortunately fail to satisfy the requirements.

A further meeting of the Bee-pest Legislation Committee was afterwards held, when detailed reports of the replies for and against the proposals were received and dealt with. A number of letters were also read, and the secretary instructed in regard to replies, etc. As several associations are about to hold meetings of members, when the Bill and its provisions are to be discussed, it was thought advisable to urge upon societies from whom replies have not yet been received to report upon the wishes of their members prior to the meeting of the Committee to be held on February 15, as in the absence of fuller returns it is impossible to make progress with the measure.

IRISH BEE-KEEPERS' ASSOCIATION.

"Audi alteram partem."

(*Continued from page* 23.)

Let us now examine the relations of the I.B.K.A. and the Department respecting foul brood legislation.

We have already alluded to the first conference held between the committee, I.B.K.A., and the representatives of the D.A.T.I. on April 13, 1901, when the Assistant Secretary of the Department said he "considered the chance of legislative help in the matter decidedly remote." Since that time the I.B.K.A., by deputations to and through its official organ, has been persistently hammering away at the Department, as our quotations will show, but this is mild compared with the dressing down it gets from the editor of the *I.B.J.* on the foul brood question. In August, 1903, we find in an editorial the following:—"The Foul Brood scandal continues"; "So far the Department of Agriculture have shown no sign of being awake to their responsibilities. The 'consideration' of Mr. Plunkett and his officials having continued for more than two years without leading to anything, they ought to honestly confess their incompetence, and give place to men with a little initiative, and who understand something about bee keeping." The editor, no doubt, thinks that the I.B.K.A. are the people, and that wisdom will perish with them, for in another place he says:—"Ireland has long been the dumping-ground for Departmental ineptitude, but we doubt that, even in Ireland, a more pitiable exhibition of combined incapacity and indifference has ever been witnessed." If comments like this are made in the official organ of an Association constantly asking for help and recognition, can we wonder that the Department turns a deaf ear to their representations, when (notwithstanding all that it is doing for the industry) it is subjected to such persistent abuse? We should, indeed, be surprised if it did otherwise. Here is another quotation:—"While the Department sit musing before their dusty pigeon-holes, crammed with 'files' re foul brood, the pest is getting in its pernicious work, and on both sides the life blood of the industry is being drained." By "both sides," no doubt the editor is alluding to this country. He then goes on to tell Irish bee-keepers that as they had failed to impress the Department with their grievances, they must make their voices heard in Parliament, and in order to do this he advises "Every man, woman, and child in

the thirty-two counties, who has a stock of bees," to write to their representative in Parliament and call attention to the scurrilous article from which we are quoting. He goes on to say:—"Should nothing useful be done in the meantime, we must start, next session, such a Parliamentary campaign as may infuse a little activity into the Department of Agriculture and Technical Instruction for Ireland."

There is a great deal more, in the same strain, but although the threatened Parliamentary campaign has been started, and another session gone by, no progress is reported, notwithstanding numerous questions put in the House of Commons by Nationalist M.P.s, all with no effect.

The Committee of the I.B.K.A., at their meeting on November 3 last, took into consideration the address of the Chairman of the B.B.K.A. at the conference of beekeepers held on October 6 last, and thereupon appointed a "deputation to wait upon the Department of Agriculture to inquire whether there was any authority for Mr. Cowan's statement," which was that "he was informed that the Irish Board of Agriculture would not support foul brood legisiation for Ireland," and "that there was no necessity for change in Ireland at present." But they—we presume intentionally—omit to give the reason why there was no need for change at present, because, when referring to the Irish Board of Agriculture, Mr. Cowan's words were, "They appointed their own instructors and had their own scheme, which was working satisfactorily, consequently there was no necessity for change in Ireland at present." The widespread publicity given in our journals to Mr. Cowan's remarks evidently caused a flutter among the Committee, for after making an incorrect quotation by suppressing the most important part of what he said, it was "arranged that this attack upon the I.B.K.A. be dealt with in the organ of the Association —the *Irish Bee Journal*." This "attack" was duly dealt with in the December number by the editor, the Rev. J. G. Digges, by an editorial counter attack on the B.B.K.A. and its chairman, in which it was asserted that the legislation committee "have sent out a new Bill for approval by the County Associations, and from the scope of this Bill Ireland is excluded." This statement we have already shown to be entirely wrong, and we therefore find it hard to believe that the editor would have made it unless he was supplied with erroneous information.

We are informed that the deputation had an interview with Professor Campbell, Dr. Traill stating the case for the I.B.K.A. The result was that "Professor Campbell assured the deputation that the Department are fully alive to the needs of the case, and would welcome legislation bringing foul brood within the provisions of the Contagious Diseases (Animals) Act, the working of which would not be a drain upon the Department's grant for educational and allied purposes."

Here, then, we have the *crux* of the whole affair, and not only do we find Mr. Cowan's statements of what he was given to understand justified, but it also makes clear the attitude of the Department in not seeking to obtain legislation, in view of the cost likely to be incurred. Further light is also thrown on the Department's position from the questions asked in Parliament. First, we gather that the Irish Department was in communication with the Board of Agriculture in England; then in the beginning of last year, after the former vigorous Parliamentary campaign, Mr. Boland was again induced to ask some questions in the House of Commons. Here is an important one: "I beg to ask the Attorney-General for Ireland whether any steps will be taken in the present session to frame a legislative measure with a view to stamping out the disease of foul brood in Ireland?" The Attorney-General replied: "A scheme has been issued by the Department of Agriculture enabling local authorities to arrange for the treatment of bees infected with this disease. The scheme also provides for their destruction, with the consent of the owner, and for the payment of compensation to the latter. The question as to the necessity of legislative action can best be decided when the scheme has been in operation for a sufficient time." Mr. Boland also asked the Attorney-General for Ireland "whether he was aware that the instructions issued by the Department of Agriculture with respect to bee-keeping do not deal with the compulsory destruction of stocks infected with the disease of foul brood; and if so, whether the Department would favourably consider further representations with regard to stamping out this disease?" Mr. Wyndham, the Chief Secretary—who replied—said "there was no power for compulsory destruction in the scheme. The county instructors appointed under the scheme had not so far experienced any difficulty in inducing owners to consent to the destruction of infected stocks when advised that such a course was necessary. The Department would give careful consideration to any further representations that might be made to it in regard to the disease in question."

We have also on record the letter of the secretary of the Cumberland B.K.A. to the B.B.K.A. of January 9, 1904, containing a quotation from the letter written by Sir Horace Plunkett's private secretary, and a reminder of the "financial assistance that Ireland has already ob-

tained for her bee-keepers," concluding with: "On the whole, the Department, for many reasons, consider it desirable to allow sufficient time to elapse to enable a judgment to be formed as to how far the action at present being taken, by some local authorities, is likely to succeed in the reduction of foul brood, before further legislative powers are sought."

If more was needed in the same direction, we might refer to what the Chief Secretary for Ireland stated in the *Times* of September 27 last with regard to the funds at the disposal of the Government. "(2) The last equivalent grant to Ireland, called the 'Irish Development Grant,' is hypothecated up to the hilt for (*a*) losses incidental to the flotation below par of stock for land purchase; (*b*) education; (*c*) reproductive expenditure. (3) Future savings on Irish administration are hypothecated up to £250,000 a year." He then goes on to say: "It follows that any body, of whatever complexion, created now to deal with Irish finance would either fall into contempt for lack of funds, or else endure only as a lever for extorting expenditure incompatible with the high standard of existing taxation and the comparatively low standard of public credit."

We now see that the position of the Irish Department of Agriculture has been consistent throughout. They have gone as far as funds permitted in fostering bee-keeping, and are not prepared to incur heavy expenditure for legislation which would throw the burden upon the taxpayer. The probable weight of this burden would not, perhaps, have been realised by bee-keepers, had not the official organ of the I.B.K.A. scoffed at the offer of £150 a year by the Department for pioneer work, and wished to know how far that "would go in the extermination of foul brood in a badly infected county, to say nothing of the rest of Ireland." There are thirty-two counties in Ireland, and we leave our readers to calculate the sum that would be required from the public funds.

The Department has, in its desire to assist the industry, recently issued a leaflet on foul brood, which it is hoped will do some good. It has not only taken up the work of the I.B.K.A., but with its better command of funds has extended it; consequently there is no longer any reason for the continued existence of the I.B.K.A. so far as instruction in bee-keeping is concerned. There remains nothing but shows to provide for, and local B.K. associations can, by applying their members' subscriptions judiciously, attend to these more advantageously than any other body. Irish bee-keepers have also two monthly bee papers, for besides the *Irish Bee Journal* there is the *Bee-keeper*, edited by Mr. Gillies, lecturer and examiner for the D.A.T.I.

But, in continuing our historical review of the Irish Bee-keepers' Association, what can be said of the crowning act of childishness on the part of the Committee, as reported in the *I.B.J.*? It appears that on December 1 last a committee meeting was held—no mention being made of who was present or who was in the chair—and we find that on the motion of Mr. Butler, seconded by Mr. Read, it was resolved to substitute the "Irish Bee Guide" for the "British Bee-keepers' Guide Book" and "The Honey Bee" in the list of books recommended to candidates for the Association's expert certificates. This means that the I.B.K.A. cannot stand fair criticism, and peevishly retaliates by supplanting Mr. Cowan's works!

(*Concluded next week.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5773.] With the temperature below zero we must still "talk" bees and bee-keeping, but our conversation now refers to the coming season. I would commend the subject of *waste* to all readers as one for consideration in matters apicultural, for if we mean to succeed we must prevent waste in every form. First, then, there is often a waste of wax—yet when we buy our foundation at 2s. to 3s. per lb., we are reminded very forcibly of the value of wax. Therefore, I say, keep an eye on every scrap of broken comb, old brood-combs, etc., and render them into wax, either in the melting pot or by the use of the "solar" wax extractor. It will pay you to do so; besides, one of the roads to success is to study carefulness.

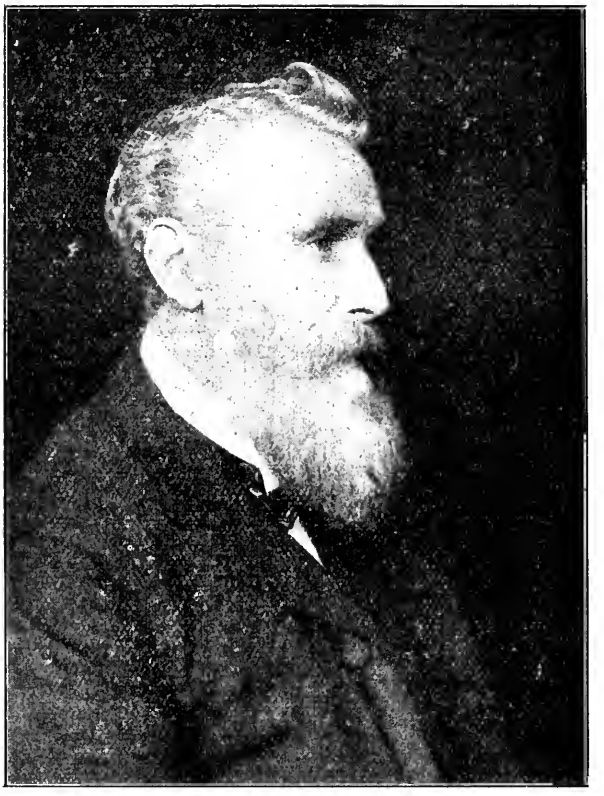
A waste of cash is often deplored by the novice after the money has been spent on useless goods. He reads of some patent article, a hive, maybe, that is to revolutionise bee-keeping and increase the honey harvest a hundredfold. At other times it is a new strain of bees, whose beauty and working qualities are declared by the vendor to be the finest in creation. Viewing all these things, I say to the beginner in

(*Continued on page* 35.)

DEATH OF MR. S. J. BALDWIN.

Following the brief notice, on page 19 of our issue for January 12, notifying the death of Mr. S. J. Baldwin, we have now received further particulars, which will no doubt be read with sympathetic interest by many.

It was known to Mr. Baldwin's family and his more intimate friends that he never quite recovered from the shock received some years ago while attending a show in the country. A sudden terrific thunderstorm broke over the place, and Mr. Baldwin, who had taken momentary refuge under a tree, was struck down by lightning. He soon recovered, however, and was able to attend to business as usual, though the effects never entirely left him.



THE LATE MR. S. J. BALDWIN.

After establishing himself at Bromley, Kent, his business grew and prospered, and—as will be seen in the illustration—he established a good-sized apiary, where hives of all types could be seen at work, and where the business will still continue to be carried on in his name as usual.

The late Mr. Baldwin occupied a prominent position in the bee-world for between twenty-five and thirty years, and was the first bee expert and lecturer engaged by the British Bee-keepers' Association to give demonstrations in the bee-tent with live bees at shows and elsewhere. His services in this connection extending over a number of years—indeed, long after he became a manufacturer of bee appliances—and those who have seen him in the bee-tent will remember his many gifts as a fluent and interesting lecturer, one whose audiences never wearied of his cheery and ready-witted addresses on the hive-bee and its work.

The business at Bromley was not confined to the home trade, for he sent bees and bee goods to all parts of the world, including America, Australia, Canada, the West Indies, and New Zealand. To the last-named place we remember him sending also a large consignment of humble bees in 1884 for the purpose of fertilising the seed of red clover in that country.

Though advancing years had begun to tell on him, he was able to attend to business up to the last, the only rest he took being a two or three months' holiday at intervals of a few years, which he always spent with his sister, Mrs. Campbell, who with her husband emigrated to the U.S.A. some years ago, and the latter has now

established a very large photographic business at New Jersey. He always returned home reinvigorated by his American trip, the last outing being notified in our pages a few months ago.

The latest communication received at Bromley from Mrs. Campbell mentioned his having paid a visit to Philadelphia, and the weather turning cold very suddenly, he caught a chill, which caused him to return to New Jersey at once, where he was confined to his room for some days. The last letter he ever wrote was penned from this room on Boxing Day, and in it he mentions "having to keep his room through a bad cold, but hoped to be well enough to start for home on January 7, for which date his passage had been already booked."

He died on December 30, and was interred at Elizabeth, New Jersey, U.S.A. It will, we think, surprise many besides ourselves to find that our late friend would have completed his seventy-third year on March 20 next had he lived. The portrait on page 34 is from the latest photograph of him, taken in America at Mr. Campbell's studio.

Mr. Baldwin has willed the business to Mrs. Elizabeth Seadon, who was his devoted housekeeper during the whole time he was a widower, Mrs. Baldwin having died in 1889. He never had any family, but of late years Mr. Edwin R. Seadon (who is seen in the apiary along with Mr. Baldwin), son of Mrs. Seadon, has been intended to carry on the business for his mother, and was very carefully trained with that object by Mr. Baldwin himself. Indeed, Mr. Seadon for some years has, we learn, done all the expert work connected with the apiary, and is fully acquainted with all the necessary details of the business in all its branches, so that it will continue, as heretofore, at the old place under the old name.

MR. S. J. BALDWIN'S APIARY, BROMLEY, KENT.

("*Notes by the Way*" *continued from page* 33.)

bee-keeping—to whom cash is a consideration—"go slowly"; your chance of success with new-fangled things, animate or inanimate, is very remote. Old hands at bee-keeping go plodding on, year after year, and are successful with the tried articles which have been tested by experience.

Size of Sections.—This question has been fully discussed in the B.B.J. time after time; some readers have no doubt given the "tall section" a trial, but the great majority still continue to use the 4¼-in. by 4¼-in. section, for reasons which need

not again be restated in these pages. The very meagre display of the new size sections on the show-bench last year conclusively points in the direction I have indicated; therefore, I say, if every one had adopted the new idea in sections, money would have been wasted with no advantage to any one, for one pound of comb-honey in taller sections would not fetch a bit better market price than the old style square sections, and would have involved the industry in a big expense with no return for the outlay.

At the meeting of the B.B.K.A. Council last week, a very pertinent matter was brought to the notice of the Council in a letter from probably the largest bee-farmer in the Kingdom, in reference to cost of carriage for honey per goods train. We bee-keepers are compelled by the railway companies to pay the highest "scale of rates" and yet take all risks of loss if our goods are damaged in transit. The matter was fully discussed by the Council, and if something can be done by the parent Association to induce the railway companies to place the charges for honey in the list of goods which are carried at "owner's risk rate," a great benefit will accrue to all bee-keepers who have invested in the pursuit as a means, more or less, of securing a livelihood. The charge for small parcels of honey at half-rate meets the wants of those who only keep a few hives, but where large packages of honey are despatched the charges are excessive, considering the producer has to take all risk of damage to his goods. I hope this matter will receive full attention, and that suggestions as to the best means of rectifying the railway charges will be made in your columns, as being welcome to all concerned.

I have received inquiries as to where the "No. 9 Triangle" brand honey jars can be obtained, and in reply need only remind readers that these jars have been advertised in your pages by two or more prominent dealers, and I have no doubt others stock these jars and will supply them if asked; therefore it is the bee-keeper's own fault if he continues to use a 17 to 18 oz. jar when one of proper size, equal in every respect as regards quality of glass, fitting of caps, etc., can now be obtained by any one who takes the trouble to ask for it. If there is a jar of proper size on the market, and a general demand for such, it will soon be stocked by all up-to-date dealers, seeing that no one wants to sell his honey at a needless loss in overweight.

"As the day lengthens the cold strengthens," says the old adage, and just now we are frost-bound. Our apiaries are quiet, and we have no fear as to the inmates of such hives as have a sufficiency of stores within reach as required; the only colonies that give any cause for anxious thought, in my own apiaries, are a few four and five-frame nuclei, which I intended to have put into hives in pairs, but was unable to do so when weather was suitable in the autumn. (See advt. page v. for replies on foul brood legislation.)—W. Woodley, Beedon, Newbury.

A WORD ON THE FOUL BROOD BILL.

FROM A BEEMAN OWNING 500 STOCKS.

[5774.] I do not wish to unnecessarily add anything to the lengthy discussion on the proposed Foul Brood Bill, but it may possibly be of some interest to you and readers generally to have my opinion, because I am a life-long beeman who makes a business of bee-farming, and have at the present time fully 500 stocks of bees at work. Let me say briefly, then, that I am totally opposed to the Bill in its present form. Moreover, I have only come across one man in our district or county who approves of the Bill, and even he would on no account permit an "expert" to enter his apiary if he could help it.—C. B. Bartlett, Bee Farmer, Witney, Oxon, January 19.

[We make no apology for inserting the above, notwithstanding the recent intimation given that the Foul Brood Bill discussion should close. We had no idea that any reader of the B.B.J. owned so many as 500 colonies of bees; indeed, we did not think there was a man in this country who possessed one-half that number. Not only so, but we are given to understand that he makes bee-keeping his sole business and source of livelihood. It is therefore safe to say that Mr. Bartlett is by far the most extensive bee-keeper in the United Kingdom, and his views will be taken for what they are worth.—Eds.]

GARDEN FLOWERS FOR BEES.

[5775.] In the pages of our bee journals the question is frequently asked, "What flowers shall I plant in my garden for the bees?" and as our Editors' replies must of necessity be brief, may I be allowed to send a more extended reply as follows?—Every practical bee-keeper knows that from all the flowers grown in his own garden for a whole year the bees may possibly be able to gather perhaps less than a single pound of honey. But, I ask, must we stop planting flowers because the produce from them is so small in quantity? I think all true bee-lovers will say "No!" We love to see our bees busily working among the flowers planted with our own hands in our own gardens. We take delight in tending these same flowers for their own sake, and it adds still further to our pleasure to see our bees visiting them with such evident delight, with-

out casting a thought on the weight of honey they yield.

Spring-flowering Bulbs.—To begin with, then, our earliest flowers must embrace as many crocuses and snowdrops as possible. I have myself planted over 10s. worth of bulbs for flowering in February, and, being all together in one patch, they only take up a small piece of ground. Some people plant crocus among the grass on borders, "dibbling" the bulbs in, and they bloom very nice so planted. You may have a line of the large yellow crocus, then one of *purpurea grandiflora* (giant purple), then a line of whites, alternated with other varieties. Or the bulbs may be planted in clumps on the grass, mixing the colours. There is, I think, no prettier effect than this when the crocuses appear in the spring. We may also dot the snowdrops in tiny groups; they look very pretty so planted, the little white clusters peeping above the snow in January and February have a very pleasing effect.

Once planted, the crocus and snowdrop require no weeding or other attention, and will spring up year by year with increasing beauty and at no further cost. This is the consolation one has on leaving the seedsman's shop with a lighter pocket after buying our first stock of bulbs. We can also divide as they multiply, and in this way increase our stock.

Wallflowers and White Rock (*Arabis alpina*).—When the crocus and snowdrop have gone, the blooms of wallflower and white rock make their appearance, and regarding these some people are apt to look a bit down, as it were, on the wallflower as a garden blossom; but there are few things more welcome in spring than the rustic beauty and sweet perfume of the wallflower. It will grow almost anywhere, and bees will be seen humming merrily among the blossoms pollen-gathering. Working-men bee-keepers who lay out a shilling on a packet of good seed may, by allowing a few plants to go to seed and sowing a small bed, supply their neighbours with any number of young plants when thinning them out before the final planting for blooming in the open garden. Here in the North, April and May are the months when the wallflower blooms best. The white rock is also a very favourite flower with bees. It is a hardy perennial, and blossoms in early spring. For rockeries, raised stony banks, or any little elevated spots, it cannot be surpassed. A few roots planted at the right time will soon spread till the whole rockery is covered, and hundreds of bees will be seen thronging to it for pollen and honey all day long. One day an old woman came to me in some agitation and asked me to go and look at her bed of white rock; as the bees were making such a noise she thought there must be a swarm. There were, of course, only a few hundred bees humming merrily aloud as they gathered their precious loads. When the wallflower and white rock blossoms are over, there is a little break or interlude before such summer garden flowers as mignonette, cornflower, borage, "Chapman's honey plant," etc., appear, but once the fruit orchards show bloom, and later on when white clover and field-forage appear, these constitute the main honey crop, and bees cannot spend much time among garden flowers so long as these important sources of supply last. Then follows the heather for those within reach of that useful source of supply. They also work very well on borage, mignonette, and Canterbury bells. The Chapman honey plant is a noble flower, standing high above many other flowers and plants in our garden. It yields pollen and nectar in abundance, and bee keepers cannot do better than plant some in a corner of their gardens. About the latest flower in the year visited by bees is the ivy, and this yields honey fairly well in some seasons.—H. Berkley Score, F.R.G.S., Lathom, Ormskirk, Lancs., January 12.

A JANUARY EXPERIENCE.

[5776.] Like your correspondent "W. D. T. R." (page 28), I too have had a "January experience." The weather on January 19 opened cold and raw, but quickly moderated, the afternoon being mild with bright sunshine. I seized the opportunity of examining eight of my ten hives for the first time since closing down for winter. I also opened up my two nucleus hives. The result of my overhaul was as follows:—Two hives found to have leaky roofs; two others I contracted by removing two frames from each; in one I shifted the position of candy; others left alone, as needing nothing. Of the two nuclei, one was dead, probably through undetected robbing and chill, I am therefore sending a bit of comb with three cells, on which I should be glad if you would give me your opinion in B.B.J. I also wish you would tell me the best kind of glass for an amateur to get for examining such cells as the centre one, which I have opened, and there seems to be something at the base that looks suspicious.—J. M. Best, Trewoon Apiary, St. Austell, January 21.

[There is nothing left in the cells to show any trace of disease, the contents having completely dried up and disappeared. Nothing short of a high-class microscope will help in detecting foul brood (*bacillus alvei*) with absolute certainty.—Eds.]

NOTES AND EXPERIENCES OF 1904.

BY A VILLAGE SCHOOLMASTER.

(*Continued from page* 27.)

[5777.] *Observations.*—After cleaning, disinfecting, and allowing some weeks to air our observatory hive after the late mishap, a stock, in which a worn-out queen was about to be superseded, was selected to furnish the three combs required, and on the very day—August 2—that the first young queen emerged from its cell, three frames without ripe queen-cells and the old queen were transferred to the observatory hive. One of the ripe queen-cells, of which there were several in the hive, being cut out and pinned on to one of the combs in the observatory hive for observation purposes. On August 11, two days later, a friend and I examined the frames in the old stock, and whilst he was looking at the young queen on a comb he held in his hand she took flight, and after slowly circling round the hive, went in again through the ordinary entrance. Later on she was successfully mated, and filled several combs with eggs.

The queen-cell pinned into the observatory hive, being neglected by the bees, failed to hatch out, but, strange to say, although the old queen continued to lay eggs, the bees, either in order to carry out the mandate to re-queen, or instinctively knowing that the parent queen must be deposed, commenced to build three new queen-cells on the bottom edge of the upper comb, and on August 12 the three cells were advancing rapidly. By August 19 they were completely sealed over. The old queen continued her maternal duties, her stately progress taking her at times right over the three queen-cells, which latter apparently gave her no concern. On August 25 one of the outside queen-cells appeared to have a small opening near the cap, but the hole was again closed a few hours later. Next day at 3 p.m. a young queen hatched out in the presence of several young and interested watchers. Before the new arrival had been on the combs an hour, it appeared as if the order for destruction had gone forth, and several relays of executioners began tearing open the sides of the two remaining queen-cells. Then began an exciting time; while some were energetically trying to enlarge the openings made, other bees vigorously tugged away at the legs or wings of the imprisoned inmates, but for some time their efforts were fruitless, the holes not yet being large enough for the bodies to pass through: besides, the legs were drawn in again if the efforts were in any way relaxed. No attempt was made to sting the young queens, and I believe they simply died from exhaustion in resisting the efforts to drag them out. Next morning the cells had been cleaned out, and in a few days very little was left of them. The young queen wandered aimlessly over the combs for several days, without being noticed either by the bees or the old queen, though she was seen to walk over the back of her parent. Later on, however, her movements over the combs became more rapid, and brought her near the old queen; she invariably turned and hurried away. This continued for about ten days, during which time the young queen was never once seen to leave the hive, and a strict watch was kept on fine days when the bees were working. On September 6 it was noticed that the young queen was being harassed by the old bees, and this caused her to become restless and excited in her movements. The climax was reached next day, when it became evident that, owing to the young queen still remaining unfertilised, the bees had determined to get rid of her. Anyway, a number of bees were seen to be slowly, yet relentlessly, encompassing the young queen, and thus prevent her moving in any direction. This continued for about three hours, when she escaped their clutches for a time. The next day she also remained free, but on the morning of September 9 we saw a clear case of "balling" the bees gradually forming themselves into a solid close, compact ball, in the centre of which the young queen was seen, firmly wedged against the glass. The parent queen took no particular interest in the dire proceedings, but continued her stately march over the combs, occasionally inserting her abdomen into an empty cell to deposit an egg therein. The ball of bees maintained its position for three days, from Friday till the Monday following, when the ball of bees began to relax, and on Tuesday morning, September 13, the mutilated body of the young queen had fallen to the bottom of the hive, together with half a dozen bees whose lives had been lost in the massacre. I placed my ear against the glass, right over the ball of bees, at the commencement, and the sound was most weird and relentlessly cruel; I could compare it to nothing but the sound of a pack of hounds when tearing to pieces the dismembered body of a fox when thrown into their midst by the huntsman. It will be observed that the time from the birth to the death of the young queen was eighteen days.

These "notes" would have been made more interesting had the "snap-shots" I took with my camera at vital points in the observation been successful, such as (1) the hatching of the young queen with the old queen a few inches away on the same comb; (2) the old and young queen side by side on a comb; (3) the massacre of the two unborn princesses; (4) the "balling" of the young queen with the old queen close by. Owing, however, to the

position of the old hive, and other reasons, I am sorry to say the negatives proved a failure.—H. SAMWAYS, Maesybont, Llandebie, January 17.

HONEY AS FOOD.

A SUGGESTION FOR COUNTY ASSOCIATIONS.

[5778.] May I suggest that our County Associations keep this view of its use before the public in the newspapers? And could some one be induced to write articles for it in the monthly magazines? If this were done next summer in time for the fresh honey to be coming in, I expect it would make the demand for honey as food greater, and possibly raise the price with people who do not mind what they pay for luxuries.

Another matter bearing on "evolution" if the subject is not closed. How have worker bees finally evolved or developed their so many good qualities, seeing they never breed? If heredity were the sole factor in accounting for everything in bee-life we should surely have had the sole peculiarities of the drone and the queen by this time, these being the only ones to transmit the generations.—J. P., Cornwall.

HUNTS BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Hunts Bee-keepers' Association was held at the Montagu Institute, Huntingdon, on Saturday, January 7. Sir A. W. Marshall presided. Mr. S. Watts (secretary) read the annual report, in which he first alluded to the loss the Association had sustained by the death of Mr. J. H. Howard, of Holme, one of their most prominent members, and among the first rank of apiarists. The Committee had already expressed their sympathy and regret to the widow and family. Apart from this, the year had been a successful one. The donations and subscriptions showed an increase, and more money had been paid in prizes than in any previous year. The financial aspect was also satisfactory, there being a balance in hand of £2 1s. 11d. The interest in bee-keeping had increased, and the nobility and gentry of the county could be relied upon to continue their support. The balance-sheet showed that the receipts totalled £16 12s. 9d., and that after deducting expenses, they had a balance in hand of £2 1s. 11d.

The report and balance-sheet were adopted.

The election of officers resulted in Lord Sandwich being re-elected president, and Sir A. W. Marshall chairman of committee, while the committee and district secretaries were also re-elected. The election of secretary and treasurer was adjourned.

A discussion took place on the question of foul brood, and Mr. C. N. White proposed, and Mr. S. Watts seconded, that the Association express itself in favour of legislation relating to foul brood. Mr. Allen Sharp, however, moved an amendment that the Association do not approve of such legislation, and Mr. Howland seconding, this was carried.

A vote of thanks to Sir A. W. Marshall for presiding concluded the meeting.—(*Communicated.*)

Queries and Replies.

[3649.] *Moving Bees in Winter.*—Would it be safe to move a stock of my bees now, in January, a distance say about 700 yards? They are now in the midst of rubbish heaps made from the slate quarries here. If I could move them this short distance I think they could work with more advantage. These heaps, or hills, are much exposed, and there is generally a strong wind blowing, making it hard to reach the fields.—W. HAYNE, Delabole, Cornwall, January 16.

REPLY.—There would be little or no risk in moving the hives under the circumstances and conditions. If, therefore, you choose a time when the bees have not flown for five or six weeks, they might then be moved at once.

[3650.] *Packing Bees for Transit by Rail.*—My bees (six stocks) are now located at Coventry, and I am about to remove them a distance of about fifty miles. Five of the stocks are in "W.B.C." hives—made from illustrations given in B.B.J. a few years ago—and one in a skep. 1. Will you please to advise as to the best way of fixing the bees and preparing the hives ready for the journey by rail? 2. Can you tell me whether there is good bee-forage about Bishop Cleeve, within two miles of the Cotswold Hills?—A. M. E., Bishop Cleeve, January 16.

REPLY.—1. Full and complete directions for packing stocks of bees, both in frame-hives and skeps, for travelling long distances by rail, are given in the "Guide Book," and it will pay you to invest the small cost of a copy if not already possessing one. Such brief directions as can be given in our query column are scarcely sufficient to ensure perfect safety. 2. We are not acquainted with the district named, and so will be glad if some reader better informed will kindly supply the information our correspondent asks for.

[3651.] *Using Honey as Bee Candy.*—I have a quantity of inferior honey that I wish to make into soft candy. Would you kindly tell me how to use it up in this way?—R. T. FORD, Leek.

REPLY.—Allow the honey to become granulated almost solid, then add to it

sufficient castor sugar (pure cane) to knead it into a very stiff paste. It will then be fit for use.

[3652.] *Insect Nomenclature.*—Numbers of insects like the enclosed fly about in our warm sitting-room in the late autumn. 1. Can you please tell me what it is? In flying it sounds like a drone bee. My bees are in "W.B.C." hives, packed for the winter with cork dust round and above, with the hive resting on an "eke." 2. At what date must I remove the latter and set the hive on floor-board?—MEL ROSE, Yarmouth (I. of W.), January 17.

REPLY.—1. Insect sent is commonly known as the drone-fly (eristalis). It is frequently taken for a drone bee when seen, but anyone observing its movements can detect the difference, the eristalis frequently alighting on flowers or anything near at hand, which the drone bee never does.

[3653.] *Moving Bees Fifty Yards.*—I have six hives of bees, which at present stand too near the road. I want to put them at the farther end of my garden, about fifty yards away, and so I ask: If the bees are kept indoors by frost for ten days or a fortnight, would it be all right to move them that distance? Your advice in next BEE JOURNAL will greatly oblige.—G., Hants. P.S.—Name, etc., sent for reference.

REPLY.—The time you name for confinement indoors is too short for safety, and it will be needful to take some other precautions to cause bees to note the new location. Place a bit of loose grass in entrance of each hive, not so close as to prevent egress, but to cause the bees to force themselves through to get out. A small branch of a tree laid on flight-board in addition to above will cause the bees to notice the change in location.

[3654.] *Non-Swarming Hives.*—I am a beginner in bee-keeping, and am very much troubled by the swarming capacity of my colonies, each of which usually sends out two swarms annually, so that my honey harvest is as a rule poor indeed—sometimes nil. I notice in dealers' catalogues hives advertised with a "swarm-preventing chamber" placed underneath the brood chamber, and containing shallow-frames, and therefore ask: 1. What is the real advantage of this appliance? My book (Webster's) does not describe it. 2. Is the appliance in question made portable for use with hives taking standard frames, so that it would fit my present hives by removing the present floor-board and placing the chamber underneath the brood-chamber? 3. Is it necessary to place a board on top of those shallow-frames in swarming time—for it seems to me, from the illustrations, that the work of the bees would be hindered in their movement across the top bars and spaces? I have tried to prevent swarming by limiting the colonies in the spring to six frames; at other times I gave them the full ten, without success. The destroying of the swarm queen and putting the bees back is beyond the capacity of a novice in the art, naturally.—P. ASHMIZIL, The Vicarage, Ulrome, Hull, January 20.

REPLY.—1. Without knowing what particular "swarm-preventing chamber" is meant—for there are several on the market—we cannot very well define its advantages or otherwise. If you will forward the catalogue or give name of firm, we may be able to help you. 2. One dealer we know of has devised an arrangement that can be adapted to hives of a certain type with little trouble, and no extra expense beyond cost of the additional device. 3. No; not at all necessary. Nor is there any necessity for destroying what you term the "swarm queen" when returning swarms, unless it is desirable to requeen the parent stock. We fear the book named above is not so comprehensive as might be, otherwise not much trouble would be experienced in overcoming the difficulties you name in above queries.

Notices to Correspondents & Inquirers.

*** *Erratum.*—In Mr. W. F. Reid's report on the St. Louis Exhibition (page 1, B.B.J., January 5) the words "thorny appearance" which appear in middle of second column should read *horny appearance.*

GEO. GRIFFEN (Clay Cross).—Lantern Slides on Bees.—If you are a member of a county B.K.A., the slides of the B.B.K.A. can be had on hire for a small sum on application. If a non-member, the charge is doubled.

L. M. S. (West Clare, Suffolk).—Moving Bees.—Please refer to replies on the subject in our query column in this issue.

"WAR NAP" (Hockley Heath, Birmingham).—Parasites of the Honey Bee.—We are much obliged for extract from *American Naturalist*, which is very interesting, but it would serve no good purpose to publish views on the question of foul brood written thirty-seven years ago. So much progress in scientific research has been made in recent years, that the subject is now viewed from an entirely different standpoint from that of 1868.

TASMANIA (Devon).—Bee-keeping in Tasmania.—We will forward—for perusal—our file copy of an Australian bee journal if you desire it, and this would afford a good idea of the condition and prospects of the industry in that part of the world.

Editorial, Notices, &c.

DR. DZIERZON'S BIRTHDAY.

On January 16 this venerable bee-keeper entered upon his ninty-fifth year, having been born in 1811. He has been a bee-keeper for seventy years, and has a world-wide reputation for his work in advancing apiculture. The principal scientific discovery of his was parthenogenesis—that is, reproduction without fecundation. This was known to exist in other insects in the first half of the eighteenth century, but it was in 1835 that Dr. Dzierzon commenced to think about it, and in 1842 to 1844 he made known his ideas in the *Frauendorfer Blätter*. In 1845 he published his discovery in the *Bienenzeitung*, and this drew the attention of scientists to the subject. "The Dzierzon theory," as this was called, was subjected to a most searching investigation by Siebold, Leuckart, and others, and, although still denied by some, is generally accepted as true. The *Allgemeine Zeitung fur Bienenzucht* prints some pretty verses dedicated to this veteran, and also gives extracts from papers eulogising him at the time of his bee-keeping jubilee twenty years ago, and mentions the honours conferred upon him. We are also sorry to hear that Dr. Dzierzon is at present unwell, and he has our best wishes for his recovery.

DEVON BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The seventh annual general meeting was held at Exeter on the 20th ult., the chair being taken by Col. Walker, in the unavoidable absence of the president, Sir Thomas Dyke Acland, Bart. Amongst those present were:—Mrs. Holland, Miss Besley, Miss Susan Hole, Miss Pittis, Messrs. Blackmore, Burgess, Catford, Furse, Goss, Parrish, Shoemack, F. P. Smith, Spencer, Squire, R. White, and E. E. Scholefield (hon. secretary).

The report showed a membership of 361, as against 333 in 1904, and the accounts a small credit balance.

The expert visitation last spring covered about half the county, the number of apiaries visited being 929, about the same as in 1903, while the number of hives was 3,766 against 3,448. The percentage of foul brood was higher for the half visited than for the whole county as ascertained in the years 1902-3, being 17½ against 16½. An autumn visitation of the two worst districts, only the diseased apiaries being visited, disclosed a disheartening state of affairs, considering that in the spring each owner had received personal notice of the existence of disease and full directions as to how to deal with it. Result:—In one of the two districts, out of nineteen apiaries only five had been treated; in the other, out of twenty-six only eight. Two only of the owners of diseased apiaries were members of the association. Where the advice given had been followed the results were satisfactory.

A list of experts showed that since 1898 twenty-three had passed the initial examination, out of whom six had succeeded in obtaining second-class certificates.

When moving the adoption of the report and accounts, the chairman remarked that the prosperity and usefulness of the association rested mainly upon its relations with the County Council. The renewal of the annual grant had not yet been authorised but he believed that for the present all would be well. As regards the future, much depended on whether the proposed Bee-pest Bill became law. The County Council being convinced of the absolute necessity for legislation had petitioned in favour of it. If, owing to differences of opinion or a general apathy amongst bee-keepers, the Bill should fall through, and the County Council decide that they were not justified in continuing to spend public money for purely educational purposes, he should find it impossible to blame them.

The president, vice-presidents, and council were re-elected; various local matters discussed; and the meeting came to an end with the usual votes of thanks.—(*Communicated.*)

WORCESTERSHIRE F.B.K.A.

ANNUAL MEETING.

The annual meeting of the above association was held on Saturday, January 28, at Worcester. The annual report stated that 771 apiaries, hives, and skeps were examined in the spring, and 926 in the autumn, of which 12.9 of those examined in the spring were infected with foul brood, and 9.5 of those examined in the autumn. Generally, foul brood was less than in 1903. The committee welcomed the action of the County Council in supporting the Board of Agriculture in their promotion of legislation for the stamping out of foul brood. On the proposition of Dr. Walpole Simmons, a resolution was passed in favour of the proposed legislation. The Earl of Coventry was re-elected president, Mr. Moreton was appointed treasurer, and Mr. Phillips secretary.—(*Communicated.*)

IRISH BEE-KEEPERS' ASSOCIATION.

"Magna est veritas, et prevalebit."

(*Concluded from page* 33.)

We have shown that the chairman's reference to the I.B.K.A. as a dwindling one, and that it also has little influence in the present effort for legislation, was fully justified. It sounds grandiloquent for the editor to quote the remarks of the hon. secretary in the *Irish Times*, to the effect that "the I.B.K.A. was never so powerful as since it has had its organ influencing thousands." The ease with which they talk of "influencing thousands" must be amusing to those who know the circulation of the journal in question. The editor, however, gives himself away in boasting that he is able to give four more pages than any other penny bee paper. Those who know anything about publishing will quite understand that, where there is a limit to advertisements, it must be a very small circulation indeed which enables one to do this without considerable loss, for were the issue twenty times as great, the loss would certainly not be small.

The only other point needing mention is the editor's criticism of the chairman's observation that "it could hardly be said that the Irish Board of Agriculture was in great favour at present, etc." The words quoted were not only innocent enough in themselves, but compare very favourably with the scurrilous language used by the editor of the *I.B.J.*, who seems to claim a monopoly of criticising this Department. The following extracts from the daily papers will dispose even of this matter, and show the correctness of Mr. Cowan's statements. This is what we find in the *Daily Express* anent the alleged utility of the Department of Agriculture, of which Mr. Wyndham is President: "Thoughtful observers are becoming more and more convinced that the Department has failed to justify its existence. The Chief Secretary's principal plea for its support is that last year it had been instrumental in giving 719 lectures, at which there was an average attendance of ninety. But what was the cost of these 719 lectures, and their utility? The answer is that they cost the ratepayers and taxpayers of this country some £18,000! Ninety copies of the *Farmer's Gazette*, or any other agricultural paper, distributed in each district instead would have given many times the amount of information, in a way much more likely to be assimilated, and would have cost £270." The writer then goes on to describe his experience of the Department's "Poultry" lectures: "Four lectures were advertised to be delivered in the local National School-house. Half-a-dozen or so of grown-up people turned up at the first one, and at the subsequent ones, when it was discovered that the lecturer had nothing practical to tell which every woman and child did not already know, the meeting resolved itself into a variety entertainment for songs and story-telling! For this we pay £100 a year, and travelling expenses another £100."

Here is another extract from a cutting sent to us from Ireland within the last week: "Sir Horace Plunkett's 'Agricultural Department' does not seem to be appreciated by those whom it was intended to help and improve. A lecture was recently announced to be delivered in a National School in County Armagh, under the auspices of the Department, the subject being the rearing, feeding, and general treatment of poultry. The lecture, however, had to be abandoned owing to the organised opposition of a large number of persons who came armed with horns, drums, and other instruments of discord. The objectors give as the reason for their protest that, while these lecturers are practically useless, they are causing an increase in the already large taxation of the country. This seems reasonable, and these people seem to know. Legal proceedings are to be instituted against the ringleaders." These extracts, we think, show that at any rate with some people the D.A.T.I. is not in "great favour at present."

We have now given our readers a brief history of the I.B.K.A. for the last four years, and have shown the causes leading to its influence being on the wane, as well as the attitude of the Department towards the agitation for legislation. It will therefore cause no surprise when we and those who think with us decline to be dragged into an entangling alliance with the I.B.K.A., which we believe would do our cause more harm than good. They will also readily understand that, notwithstanding the "exclusion" bogey raised by Mr. G. M. Saunders, and his equivocating circulars, we have no hesitation in again repeating that there never has been any desire to exclude Irish bee-keepers from the advantages of legislation, and all contrary assertions are based upon false hypotheses. That any interference in Irish affairs on our part would only amount to meddlesomeness is certain, for as we have shown, Ireland is quite independent of us, and has a Department of its own, which can do for Irish bee-keepers all that our Board of Agriculture can do for us. Not only so, but although Ireland, as we have shown, has not been excluded from the Bill approved by the legislation committee, it is not at all probable that the measure would be promoted in Parliament without our Board of Agriculture first

submitting it to the Irish Department and ascertaining their wishes as to being included. If they did not desire such legislation the Bill would, as a matter of course, have to be amended in the usual way, by a special exclusion clause. We have the interest of Irish bee-keepers at heart quite as much as anybody, but we do not think the bullying attitude of the official organ towards the Department is conducive to the best interests of bee-keepers in the Sister Isle, and we regret to find gentlemen of integrity on the committee so influenced as to countenance such tactics.

Not content with heaping opprobrium on the Department in their own organ, they must needs introduce the subject at the convention of American bee-keepers at St. Louis, for we find Dr. C. J. S. Digges (brother of the editor of the *I.B.J.*) attending this convention, ostensibly as the representative of the I.B.K.A., but apparently to advertise the projects in which his brother is financially interested. In a somewhat frivolous address he thus alluded to the foul brood question: "Through this affliction the bee-keepers in Ireland have suffered severely, and are now obliged to introduce a Bill in Parliament for the purpose of doing what it is the duty of the Irish Department of Agriculture to do, viz., to combat the disease which, through the apathy of the Department, has been allowed to spread through every county in Ireland." Further on he added: "The Department has steadily discouraged the I.B.K.A. in its work, but the Association will persevere in the hope that, with a change of Government, the industry may receive more recognition from the powers that will then be." Common patriotism might surely have intervened and prevented such utterances in a foreign country. Compare these and other flippant remarks, fully reported in *I.B.J.* for November, with the erudite and really instructive report of Mr. Walter F. Reid (page 1 of B.B.J. for January 5), the representative of the B.B.K.A. at the same convention; a report that must have cost the writer hours of patient labour and study, and some idea may be formed of the relative value of the two Associations.

In conclusion, we would say that the B.B.K.A. has always endeavoured to teach bee-keepers to be independent and to rely as far as possible upon their own efforts, and not depend entirely upon Government help as the I.B.K.A. has done. We have, therefore, never had anything like so much help from our Board of Agriculture as the Irish have received from their Department. On the other hand, the B.B.K.A. has made persistent and costly efforts to obtain the help of the Board of Agriculture in promoting the good of the bee-industry in every way consistent with the desires of the majority of bee-keepers. But in these efforts there has been no scurrilous language in the B.B.J. when advocating the claims of bee-keepers, such as is used in the *I.B.J.*, and consequently the B.B.K.A. is in close touch and on the most friendly terms with the Board of Agriculture, and we hope will remain so, notwithstanding the tactics of those who are trying to cause dissension by persistent misrepresentation of facts.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

[5779.] *Scouting.*—I am not an entire disbeliever in the theory that bees send out a certain number to exploit their surroundings before swarming, but I feel morally certain that it is rarely done, and that where resorted to only a very few bees act as scouts. The almost universal rule is that the swarm issues in gay abandon, fully cognisant of the fact that there are hundreds, or even thousands, of alighting places in close proximity, each one of them well suited for a temporary camping ground. By inherited instinct, acquired by centuries of domestication, bees place confidence in man's readiness to provide a new domicile when they trek. Scouting on a large scale, unless on very rare occasions, if it ever was a confirmed practice, has been well-nigh eliminated by man's guiding care.

Honey.—Solomon says: "My son, eat thou honey, because it is good, and the honey-comb which is sweet to the taste." Mahomet is even more emphatic: "Honey is that sweet and wholesome substance which sustains and strengthens the body, which cures all maladies, a thousand times preferable to poisons administered by the doctor." An eminent physician says several cough cures and salves are based on honey ingredients, and it is an excellent gargle. It is an excellent demulcent which tends to soothe taken inwardly, an emollient which, when applied to any irritating surface, promotes its healing, a valuable nutriment which supplies a peculiar form of sugar in a condition

ready for immediate digestion. Children especially delight in this natural sweet, and it supplies a felt want during the period of growth. But for all, it is a delicious and appetising dainty.

Olla Podrida.—A census of British bee-keepers would show something like 99 per cent. using dividers in their section racks, and even the hundredth man believes in their use. On the question of the best material we might not have the same unanimity. Some stick to wooden separators and others believe in tin solely. I have both, and see no special drawback to their indiscriminate use. Some wooden ones, however, are so thin as to be short lived, whilst others are so thick as to crowd out a row of sections in a very accurately cut rack. Long or "combination" hives are dying out, and a very much smaller percentage of bee-keepers now work them than did about twenty years ago. With some good points in their favour, they are not so manageable, nor are they so convenient or successful in supering as the other style of hives. That *mellifera* argument is a poor one, and will not hold water. There is a sweetness and euphony about our term *mellifica* which will perpetuate its use to the end of time, so I vote for its continuance. I am in love with the new "bady nuclei" of the "Swarthmore" system, and I should like to learn the results of its use in this country. Some kind Samaritan might take a hint! I had supposed that foolish *canard* about selling artificial comb honey was dead as a door-nail, but it seems to have been recently "resurrected" in America. Bee-keepers, when examining hives in autumn, often rashly conclude that there is no queen because there is no brood. On examination even she is not seen. This arises from the fact that the mother bee is much smaller since she ceased to lay, and may readily be mistaken at a cursory glance for a worker bee. Doolittle testifies that large hives are not swarm preventers; that, indeed, he had as many swarms from very large ones as from his normal ones. The only difference was that the swarms came off a week or ten days later. He has even a suspicion that bees are more inveterate swarmers in the large hives. He has also found bees content to go on consigning honey in every vacant cell in the brood body of deep frames, thus blocking the way for the queen's labours, instead of consigning it to the sections above. In both instances my experience coincides with his. My bees at no time of the year show any crossness but just about when the heather season begins to wane, and then at times I confess to feeling a slight tremor when I have to pass along the line of hives unprotected. Curiously, any necessary manipulation dissipates the feeling.

Rosemary.—The *Garden* says this plant comes far better from a seed than a cutting. If a seed can be coaxed to root in a crevice of an old sunny wall it flourishes best, as it likes the lime of old mortar and is far more aromatic in such scant harbourage. Sometimes it can be seen covering the gable end of a cottage to the very eaves, for with a little care and training it will reach a height of 15 ft. "And then how the bees revel in the grey-blue flowers on a bright morning in early spring. For that reason alone bee-keepers do well to grow plenty of it for the excellent flavour which it will give to their honey." I fancy there may be something in the system of propagation and growth here advised, for most of the specimens seen are small and stunted compared to the above stately plant.

Introducing Queens.—Here is another useful "kink." Somebody about a year ago wrote me that he always introduced his queens in the following novel way. He placed the new one in a cage on an outside comb so arranged that she could not be molested, leaving the old queen still at the head of the stock. Then in three days' time he deposed the old queen and liberated the new one at one opening of the hive. The newcomer, having acquired the scent of the colony, was at once accepted without any demur from the bees. A trial last summer proves that it can be done. It has several features to recommend it, among them being that there is no interregnum, no cessation of egg-laying, and it has been proved that the new queen has actually been accepted before the old one is deposed.—D. M. M., Banff.

FOUL BROOD LEGISLATION.

MR. R. F. HOLTERMANN'S VIEWS.

[5780.] Time and again it has been impressed upon me to contribute a few lines on the question of foul brood legislation to the BRITISH BEE JOURNAL, and I feel that when so important a subject is being discussed in your columns it may be useful to have the experience of those to whom the subject is practically familiar, and I feel it is hardly right to remain silent. I say this because the discussion on your side of the water must of necessity be largely theoretical. There is no wish on my part to do more than suggest that the discussion should be free from personalities, because we should give full credit to opponents who are honestly advocating from their own standpoint what they believe to be best for the industry, and are, perhaps, more fair and sincere in their arguments than those who sup-

port us for personal friendship, or those who, through lack of courage or for personal regard, remain silent when they ought to speak out.

My name has been mentioned in the BRITISH BEE JOURNAL in this discussion, and, I think unintentionally, in a way scarcely justified.

We have in the province of Ontario had our foul brood difficulties, and are having our battles over them. Nor have our difficulties by any means been solved, and our battles are not yet over. Thus far I have had the worst of it, and yet behind those who are opposing present methods there are some who need not fear, or feel that their work has been in vain. In any case, they would sooner be defeated in the cause they advocate than triumph in the other. In giving my views, I shall avoid reference to undesirable things by advising a course which I think it well to guard against.

We do not object to legislation, as far as I know, there is not one who would do without it. There is a marked improvement in regard to checking foul brood since we have had a provincial inspector. The Foul Brood Act we have is better than the work done under it; by that I mean, the Act has not been lived up to. As a past president of the Association, I hold myself responsible for my share of this condition of things. The Act calls for disinfection of the inspector's person, in addition to the washing of hands, and in my estimation this is not practical. But we have the smoker carried from apiary to apiary, and the point of a knife used to examine cells, and the former never disinfected, the latter carefully disinfected by wiping it on the ground, or perhaps the trouser-leg. Then the inspector tells us that hives need not be disinfected at all; also that store-combs which contain no honey and have not been used for brood-rearing need no disinfecting, even if they have been on foul-broody hives. The shaking method of dealing with foul broody colonies practised by Mr. McEvoy is not altogether satisfactory or safe. It is simply giving one shake, putting the bees on empty frames or very small starters, and compelling them to build comb with the honey they have taken from the foul-broody hive. Then, in two days or so, another shake, lest some of the foul-broody honey has been stored. This plan no doubt reduces the risk very greatly, but may not the bees carry off diseased honey sac and again store it? We have as an association no record of where the inspector goes, or when a cure is effected and when not. Surely this should not be? Also, when there is a recurrence of disease we are not informed of it, and it may be attributed to carelessness on the part of the owner, or to reinfection through robbing. But it is known that it may just as likely be the result of failure to recognise other sources of infection—through the queen, bees, or failure to have hives or combs disinfected.

Professor Harrison, of the Ontario Agricultural College, Guelph, Ontario, has done some excellent bacteriological work in connection with foul brood. But Mr. McEvoy—who is the inspector of apiaries—and Professor Harrison are at variance about these possible sources of infection. Unfortunately, so far the majority of bee-keepers have sided with Mr. McEvoy, and the Government stands in the unique position of issuing one bulletin which states that the store-combs and hives before mentioned are safe to use without disinfection, while another bulletin says they are not. The Association and the Government have also been guilty of the unfair practice of publishing the inspector's report and suppressing criticism thereon.

A certain number are fighting for local inspectors rather than one for a whole province. Where good men can be got as local inspectors there is less expense, and as we know well the best season for dealing with the disease is very limited, we also know that one man can only be in one place at a time; therefore, unless we recognise more sources of infection, and unless we change our ways, we shall certainly not make much progress. One cause of inactivity in the matter is fear of the inspector. The latter goes about the country at Government's expense, and can make and unmake reputations in a short time. This has been frankly stated to me by men who said I was right, but were afraid of the injury which might be done them. My contention, therefore, is that by having local inspectors the power of all is usefully curtailed. If there is a committee appointed to guide and direct the inspector, they should be strong and firm yet kind, and in the Act and the regulations let nothing appear which cannot be carried out, and then *abide* by them. With the exception of what is stated in Professor Harrison's work, we in this country know nothing about feeding bees on medicated syrup to keep in check or cure foul brood.—R. F. HOLTERMANN, Brantford, Ontario, Canada, January.

ARTIFICIAL POLLEN.

HOW TO SUPPLY IT TO BEES.

[5781.] As the days lengthen and the sun gently woos the early spring flowers into bloom, the little dwellers in the long-silent apiary will again shake off the sloth of winter and venture forth in search of pollen from the early aconite and crocus. Even now the eggs from which will come

the first of this summer's thousands of honey gatherers may have been deposited in the centre of the cluster by the anxious mother bee. The sight of renewed activity among his bees naturally turns the thoughts of the bee-man to the coming season, and to the work necessary to make it a success. Pollen his bees must have if large numbers of young bees are to be reared in time to take advantage of an early honey flow. Until natural pollen becomes plentiful in the fields, some substitute is a necessity. Here is my method of supplying it in the shape of pea or rye flour. Prepare a long box, say 18 in. wide and not less than 18 in. deep, so that bees may be well out of cold winds when working in it. Have it put on legs, to keep it well up off the damp ground, and it must be made to fasten down to prevent being blown over. Into this fit another shallow box or tray (the bottom of a strong cardboard box with an inch or two of the sides and ends left on will answer), which can be easily lifted out and put back again as required. Fill the box half full with shavings, and be sure they are sweet and clean. The fine narrow shavings often used for packing are best, the idea being to get something that will stand up firm and allow a free passage for bees to work through and among. Over the box a sloping watertight roof should be fixed. This ought to be hinged, so that in showery weather it can be opened wide enough to admit the bees, but still be a protection to them and the contents of the box from sudden showers of rain. At night and on very stormy days this will be closed down, but it is advisable to have a small aperture always open in the daytime, for when bees once know there is food within reach they will venture out whenever the sun shines, and if compelled to fly about seeking access to hidden stores, they are liable to drop and become chilled. Place the box so that the sun will shine into it when you open up the top, and let it be in a sheltered spot near the hives, but not right among them. If possible, have it placed where the line of flight from the hives to it will be alongside a sheltering fence or wall. Should the bees have to cross a wind-swept open space to get to it, many would be blown to the ground and die. Keep your flour in a dredger or tin box with perforated lid, and after fixing up the lid or roof of the feeding box, dust the flour all over the shavings. If, although bees are flying freely, they do not visit the feeding box, place a piece of comb with a little honey in it somewhere near. Soon this will be covered with bees, when it should be gently lifted with the adhering bees and placed in the box with the flour. After numbers of them have loaded up and gone home, shake the remaining bees off among the flour-laden shavings, and take away the comb. Having found out the flour, they will work on it with an energy quite surprising to any one who has not tried it. This will continue right on till natural pollen appears in the fields, when no more will be taken. The movements of the busy throng among the shavings will gradually work the flour down in the bottom of the box, where, if not removed, it will get damp, and unsuitable for the bees to collect. Each evening after all have gone home, lift out the shavings and the shallow bottom and clean it out. Then next morning lift and fix up the lid and dust in a fresh supply. If a large number of bees are visiting the flour, it is better to dust the shavings at intervals during the day, because if a quantity of flour collects in heaps, and bees tumble into it, they are chilled by the cold flour, and being unable to fly until they get it brushed off, they may crawl from the shelter of the box on to the ground and perish. See that the bees have access to a supply of pure water.—G. W. AVERY, Cockermouth.

BUCKWHEAT FOR BEE-FORAGE.

[5782.] I am thinking of planting a patch of buckwheat with the idea that it may afford a little pasturage for my bees, and also provide corn for my poultry. I should be glad, therefore, if you could give me some information respecting the culture of same, when seed should be sown, depth of soil preferable, and where seed might be obtained. I send name, and sign—CONSTANT READER, Camborne, Cornwall.

[We forwarded above to our friend, Mr. Richard Brown, Somersham, who we knew regularly grows a quantity of buckwheat, and he has kindly sent the following information regarding it.—EDS.]

Buckwheat (or brank, as it is called in this locality) is extensively grown in our district as a sort of catch-crop where barley or roots have failed, or where old pastures have been ploughed up, and there has not been time to get another crop that would pay as well. It is not affected by "wireworm," and is a splendid preparation for wheat, as the leaves of the plant drop off when the buckwheat is ripening, and thus form a manure for the ensuing crop.

The culture of buckwheat is very simple. A fairly good tilth is required, and sow not later than second week in May in drills two inches deep, about a foot apart. Hoe and keep clean until the plant begins to show the flower. It attains a height of about two feet, and is in bloom—from first to last—about one month. Bees are very fond of it, but they do not visit the bloom

after mid-day. The honey from it is very dark and pungent; but I know a great many people who prefer it to white clover honey.

Buckwheat is an excellent food for poultry in winter, but should be mixed with other cereals. The best way to give to poultry is in the sheaf, and let them do their own "thrashing." I also find pigs are fond of it when a sheaf or two are thrown into the sty, as it has a soothing effect, and the pigs rest better afterwards.

It has the same effect on bees, and when they are working on the buckwheat in the morning you can do all your manipulating with ease; but do not attempt to disturb the bees in the evening when they have got over their little frolic among the buckwheat earlier in the day. If you make any attempt at handling the frames at that time, well, look out for squalls!

In conclusion, I may say buckwheat is a most valuable crop for bee-keepers to grow, and if there should be any difficulty in obtaining seed, my next-door neighbour, who is a corn merchant, can supply any quantity from one bushel to 100 quarters, as he has stands at Mark Lane and all the local markets.

Any further information you may require I shall be most happy to give.—RICHARD BROWN, Flora Apiary, Somersham, Hunts.

CHAPMAN HONEY PLANT.

[5783.] Will you kindly allow me to thank the numerous applicants who have written in response to my offer of plants on page 507 of B.J. for December 22? I hope I have sent to all, if not plants, seeds. I would now say that, if by chance I have missed forwarding same to any that sent stamps, if a postcard were now sent I will put the matter right. I might also say to those who got seed, if they have the use of a hand light or frame, or a greenhouse, and sow at once, then plant out in spring as soon as large enough, many plants will bloom same year if treated as a perennial. I might say that I had applications and sent plants or seed almost to all parts of England, Ireland, and Scotland. It has been a great pleasure to me to try and help my brother bee-keepers in this way.

My fifty-six hives had a grand cleansing flight on January 7. It was like a summer day here.—G. F. MOWER, St. Cross, Winchester.

FOR AND AGAINST LEGISLATION.

[5784.] I am glad you have allowed Mr Bartlett's letter (5774, page 36) *re* foul brood to appear in your columns, particularly so because his attitude to the Beepest Bill corresponds with my own.

I am sorry you did not insert my letter of 11th, because it might thus have been seen that the most extensive bee-keeper in Great Britain, as well as the bee-keeper who holds the record for honey takes (not only as regards individual yields, but for average yield of whole apiary), are both strenuously opposed to the Bill in its present form.—LANCELOT QUAYLE, Glenmay, Isle of Man, January 26.

[Your letter of the 11th was only one of a great number not published for the reasons stated, and we trust that all who have written will see the necessity for closing the correspondence, which was only tending to confuse the issue by its acrimony and reiteration. We trust that all will, however, take the simple means of expressing their views by writing to one or both of the gentlemen who have taken the trouble to collect votes for or against the Bill.—EDS.]

KENT BEE-KEEPERS' ASSOCIATION.

PROPOSED RE-CONSTRUCTION.

[5785.] I am pleased to tell you that Mr. Arthur Schofield, of Keston, whose generous offer appeared the other week in the B.B.J., has fallen in with our suggestion, and is eager to begin work without delay. We purpose getting as many old members as can attend at a meeting at Dr. Giddings' residence, Hillside, Beckenham, on Saturday, February 4, at 6 p.m., for the purpose of reconstituting the K.B.K.A., electing a provisional council, and appointing Mr. Schofield to the honorary secretaryship. I trust we shall be able to secure a good attendance. I have seen our late hon. secretary, Mr. Brice, who will render Mr. Schofield all the assistance in his power. Of course, it will be no light task, but difficulties disappear in proportion to the resolution with which they are faced, and I have great hopes that Mr. Schofield's enthusiasm will enable him to enlist the majority of Kent bee-keepers in support of his effort.—E. D. TILL, The Priory, Eynsford, Kent, January 30.

WOOD ANTS.

[5786.] A gentleman, residing in Penarth, Glamorganshire, who has made a study of these interesting insects, kindly sends me the following particulars, which will no doubt be useful to "East Kent" (3640, page 9):—"Your correspondent should have very little difficulty in introducing the wood ant into the woods near him, providing the conditions in them are suitable. Much depends upon soil, aspect, and food conditions, and as he says there are plenty of the required ants within short distances of him, it seems likely that the conditions in his particular wood are not altogether favourable, otherwise the

ants would most probably have established themselves before this.

"He should bodily remove, say, half a dozen nests in separate sacks and put each down with as much of its surrounding soil as can be conveniently transferred in widely separated, but so far as he can judge suitable, parts of the wood. This done, the ants should establish themselves without any further attention; but if they all migrate, it would be fairly certain that the site is not suited to them. New colonies will be more likely to settle in a fresh locality than old ones, for it is surprising how far ants explore the district around their nests. I have myself traced them to distances of fifty yards, and have read of cases where foragers have travelled distances up to half a mile, and safely returned; but there is not much trustworthy information on this point, and unhappily I have never had sufficient leisure to thoroughly investigate it for myself. 'East Kent' asks two questions, and the answer to both is in the affirmative. New nests are most probably formed by fertilised females dropping to the ground in August and September after the nuptial flight and establishing themselves in suitable localities, where they are probably found by a few stray workers from a neighbouring nest and adopted by these workers. There are also instances of migration of a whole colony, females, males, and workers, to a new locality. Workers are not neuters in the case of ants; it seems thoroughly well established that male eggs can be produced by worker ants, and I have myself kept workers in glass covered nests and found them able to produce males. That the wood ant's nest can be transferred bodily to a new locality was shown very clearly by a friend of mine, who, in his attempt to establish an observation nest, was unfortunate enough to allow them to escape, and discovered them afterwards thoroughly established in his wood-house, and had considerable trouble in exterminating them."

I trust the above information will be useful to "East Kent" and other B.B.J. readers.—H. Samways, Maesybont, Llandebie, Carmarthenshire, January 17.

LEAFLET ON FOUL BROOD.

[5787.] Referring to your very interesting articles on the I.B.K.A., and to the leaflet on foul brood which you mention on page 33 in current week's issue, it may be information to some of your readers to know that this very instructive leaflet can be obtained gratuitously upon application to "The Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W." *The envelope need not be stamped.* —G. S. Faunch, Ilford, January 28.

A BEGINNER'S REPORT.

[5788.] I have been taking the Bee Journal and *Record* ever since I commenced bee-keeping, and have been much interested in contents of both, besides receiving a great deal of pleasure therefrom. Some of these days I will be sending up an account of my little experiences, which might be interesting to beginners. Although only a beginner myself, I have had a bit of the ups-and-downs of bee-keeping; but am pleased to say that the cash side of my book shows a nice balance to the credit side, but I will give you a fuller account of my doings a little later.—L. B., Workington, January 28.

CLEARING OUT FOUL BROOD.

[5789.] On page 512 of B.B.J. for December 29 last Mr. Woodley states that several years ago there was foul brood within three miles of his apiary, and that by following advice he then gave to the skeppist bee-keepers whose hives were affected it has been cleared out. If his advice was not total destruction of the stocks, it would be interesting to know what course was advised. By informing us Mr. Woodley would certainly confer a favour on bee-keepers.—J. W. L.

Echoes from the Hives.

St. Austell, Cornwall, January 27.—On January 25 and 26 I saw pollen being carried into two different hives. Is not this unusually early? Good or bad? It seems strange, while bees are pollen carrying here, to read of Mr. Woodley's apiary being ice-bound.—John M. Best.

Queries and Replies.

[3655.] *Keeping Bees in Roof Turret.*—I will be much obliged if you will help me me in the following:—This house has several circular turrets on roof (as sketch, Fig. 1), which at present are not used for any special purpose. They each have a window 26 in. from the floor, and are entered from the inside of the house by a trap-door, which is just *below* this window, and the floor-space is circular of 4½ft. diameter. In view of these particulars I ask: 1. Would it be practical to keep a bee-hive here? The hive would have to stand against the wall opposite to window (to allow of the trap-door

opening). The chief difficulty seems to be to provide a *covered* passage-way from the entrance of the hive to an aperture cut in the window-frame. The hive could, of course, be put on a stand to make it the same height as the window, so that the passage-way could be horizontal, if this would be an advantage. I have several hives outside; but this might be convenient for such plans as mentioned in the "Guide Book," page 114, as a lamp or stove could easily be kept in the turret to increase the temperature. 2. What should the temperature be for rapid feeding on this plan? The ordinary outside lifts and roof would be unnecessary, as the turret is quite watertight; but I suppose it would be well to wrap the body-box and supers (when there were any) well up in quilts, etc. How wide should the covered way be, and what would it be best to make it of—wood, covered with glass, or three sides perforated zinc, with a wooden floor? The inside of the roof of turret ends in a cone, same as outside. Any help will be appreciated. I send name, etc., and sign—GRIP, Aberdeenshire, January 27.

REPLY.—1. Quite practical, but the advantage sought to be gained in carrying out the plan of rapid feeding mentioned in "Guide Book" would be more than counter-balanced by the disadvantages of bees labouring under many difficulties in their high-roof domicile. We should not recommend your adopting the turrets for the purpose; the warmth and rapid feeding in autumn would tempt the bees out, and scores would no doubt be lost in the vain endeavour to reach the hive entrance in high winds. 2. The temperature should be kept at about 65 deg. Fahr. The passage-way to hive need not be more than 4 in. wide, and glass would be the best material for top.

[3656.] *Buying Land through Societies.*—Can you tell me if there is a society through which a person can acquire two or three acres of freehold land, and paying for it by instalments? If so, I will be obliged if you will give me the address of the society through the BEE JOURNAL.—J. E. S., Streatham, S.W.

REPLY.—We do not of our own knowledge know of such a society; but it is pretty certain that a fair percentage of the purchase money would have to be paid in cash, and remainder advanced at interest, the society holding a mortgage on the property as security. Perhaps some reader can enlighten "J. E. S." on the subject? If so, will be glad to publish the information in our pages.

[3657.] *Bees in "Wells" Hives.*—As you have so kindly replied to my queries on former occasions in your valuable paper, I am again taking the liberty of asking your advice about two stocks of bees that I have in a "Wells" hive. Of course, they are separated, each having its own entrance. At the end of the season they both had abundance of sealed stores, and I filled the two-inch space all round with fine dried grass to keep them warm during the winter. Of late I have been observing that the bees in this hive come out much more—even on days when there is no sunshine and the atmosphere not at all genial—than from the hives on either side of them; and considerable numbers of bees have alighted on the ground and perished. Is it probable that they are too warm, or what may be the reason of their being so much more lively than any of the others? I have not examined the combs of late, but expect that they still contain plenty of supplies. I would highly esteem any advice or guidance that you could give me in next issue of B.B.J. I send name and sign—NOVICE, Bridge of Allan, N.B., January 30.

REPLY.—It is, of course, possible that the two lots of bees, if clustered together with only the perforated divider between, may form a stronger and warmer lot of bees than single stocks in ordinary hives, especially when packed all round as stated, and the bees may, in consequence of the extra warmth, fly abroad when the other hives are quiet. But we should take the first chance of a warm day to examine the combs, and see how the bees look on them. This inspection would do more to explain matters than our views from a distance.

[3658.] *Measurement of Standard Frame.*—I find that in describing measure of standard frame the "Guide Book," on page 37, line 5, reads thus:—"Top bar, 17 in long, $\frac{3}{8}$ in. thick; bottom bar, $\frac{1}{8}$ in. thick; side bars, $\frac{1}{4}$ in. thick; the width of all being $\frac{7}{8}$ in." Now, instead of being $\frac{7}{8}$ in., I make it exactly 1 in., thus:—Top bar, $\frac{3}{8}$ in.; bottom bar, $\frac{1}{8}$ in.; two side bars at $\frac{1}{4}$ in. = $\frac{1}{2}$ in.; total, 1 in. Will you kindly explain? I send name and sign—INQUIRER, Tatsfield, Surrey, January 26.

REPLY.—The measurements given on page 37 of "Guide Book" are perfectly accurate; each of the four pieces of wood of which the standard frame consists being $\frac{7}{8}$ in. wide. We cannot understand your adding the widths of all four pieces together and saying the width should be 1 in.

[3659.] *Bees Short of Stores.*—I have only two hives, and fed the bees last September with about twenty old pounds of syrup. Fearing they were short of food, I took a peep at them last week. No. 1 had

scarcely any stores left. No. 2 had one and a half frames sealed food. I gave both two pounds of candy. There only seemed about two and a half frames of bees in each crowded together. They have each ten frames in hives, and therefore ask: 1. Is it possible to winter No. 1 safely? Hives, double sides, single back and front. The alighting-boards seem to have spots of brownish substance on, which the bees excrete when flitting about. They have been kept in by cold for some time. 2. Kindly tell me in your journal to what variety of bees the enclosed belong. They are marked Nos. 1 and 2. Those marked 1 seem to be rather vicious when disturbed. I send name, etc., and sign—QUERIST, Bramhall, Cheshire, January 23.

REPLY.—1. The first-named will need a constant supply of soft candy to ensure them against starvation. You might give them in addition a pint of warm syrup about once a fortnight as a further safeguard against famine. 2. The bees of No. 1 have a slight trace of Carniolan blood; No. 2 are the ordinary brown variety.

[3660.] *Dead Bees Cast Out in December.*—As a regular B.B.J. reader, I beg to ask advice:—I have one stock of bees in frame-hive, and on January 25, the day being bright and sunny, I noticed some bees on the wing, flying freely. On the following day, to my dismay, when passing the hive, I found about 200 bees dead on the ground in front of the hive. I am sending some for your inspection, and will be glad to know (1) the cause of death. 2. Do you think they are old, worn-out bees, or are they young ones? From the same hive I took last year in shallow-frames 25 lb. honey, and afterwards, in the autumn, gave the bees syrup, made as directed in "Guide Book." I have also at the present time 4 lb. of candy under the quilts, over feed-hole. 3. Kindly tell me what kind of bees these are, whether ordinary natives or not? I send name and sign—NOVICE, Potton, January 27.

REPLY.—1 and 2. The dead bees are no doubt old and worn-out ones, and need not cause alarm even if so many as 200 are cast out, as the queen, if young and prolific, will soon work up the colony to full strength when breeding time is more advanced. 3. Bees sent are the ordinary brown variety common in this country. You should examine the combs on a fine day to ascertain how the stores are holding out. If there is a sufficiency of sealed food in the hive, it is worse than useless to give candy at this season.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Notices to Correspondents & Inquirers.

*** A correspondent, dating from South Kensington, London, writes:—"I am thinking of starting an apiary near Headcorn, nine miles south of Maidstone, and should be much obliged if you or any of your readers could tell me whether or not the district is a good one for bee-keeping; also, whether foul brood is prevalent there?

N. W. (Hampstead).—Insurance for Bee-keepers.—The insurance scheme of the B.B.K.A. is hardly intended to cover such risks as causing a nuisance to neighbours, these being dealt with by action in the County Court. The charge under above-named scheme is 1d. per hive, with minimum charge of 6d. An extra charge of 6d. is also made to non-members of B.K. Associations, so that a single hive would entail a cost of 1s. per annum.

G. T. W. (Wimbledon, S.W.).—Arranging an Apiary.—A space nine yards by six is much smaller than we should like to locate so many as twenty-five stocks of bees in frame-hives upon. We mean, of course, in view of there probably being near neighbours close at hand at Wimbledon. The idea of arranging seventeen of the hives in one semi-circular line and four on each side a yard apart, and all facing outwards, is a good one for yourself, as it leaves a free space in centre; but it would be worse for the neighbours across whose gardens the line of flight would be. You have an experienced professional bee-man at Wimbledon, and we recommend your getting him to view the proposed plan, and give advice thereon.

LOVER OF BEES (Mid Yorkshire).—Bees and Hazel Catkins.—There is surely no need for starting a discussion which suggests unfriendly contention at the very outset on so simple a matter as that in dispute. It seems to us that the offer to pay any reasonable price for a snapshot of bees at work on hazel catkins by Mr. Jas. Skinner, of Bristol, need not take the shape of "fighting out the whole matter in the pages of the B.B.J.," and offering a prize "to be called the catkin prize," to be provided by the loser in the battle. We have had contention enough and to spare recently in our pages, so we hope our friends, "A Lover of Bees," "R. R.," "St. Albans," and Mr. Skinner, will investigate the matter in dispute for themselves this spring, and we will be very pleased to publish results; but we must decline the office of arbitrator between the contending parties as proposed.

Editorial, Notices, &c.

TONS OF FINEST SCOTCH HONEY (?)

ON OFFER AT FOURPENCE PER POUND.

A correspondent writing from Kent, under date February 5, says:—"Will you kindly give me your opinion on the enclosed sample of honey which I have received from the firm whose letter I have also enclosed. They state it is guaranteed to be the product of Scotland, which I rather doubt," etc., etc. After some further deprecatory remarks anent the sample, our correspondent adds: "Do you know anything of the firm? An answer in B.B.J. will much oblige."

Our reply is, we have no knowledge whatever of the firm save what we gather from particulars at head of the typewritten communication forwarded. The substance of this letter appears below, omitting, for obvious reasons, names and address; and we gather therefrom that it is a limited company with offices in a well-known business street in the City, the names of two managing directors being printed in the usual way. Nor have we the slightest reason for doubting the respectability and standing of all concerned. On the other hand, we are simply amazed to see it stated that tons of the "finest Scotch honey" is on offer by a London firm, "packed in barrels at 4d. per pound, free on rails in London."

Occupying the position we do as the official organ of the British Bee-keepers' Association and its affiliated county associations, being also the only paper in the kingdom devoted to the British bee-industry and its interests, we wonder what our readers will think on reading the above, in view of the fact that our pages have been recording a fairly good honey-season last year in Scotland, but that honey has been selling well at very good prices, ranging between 8d. to 1s. 3d. per pound. It will most probably be asked: Whence comes the ingathering that allows of such a drop as the price quoted implies? We shall await news from Scotch readers that will let some light in on the subject, and do not doubt it will be forthcoming in a very short time.

The letter reads as follows:—

". . . . . Limited,
". . . Street, London, E.C.,
"January 31, 1905.

". . . . Esq.

"Dear Sir,—We have to offer just now a few tons of finest honey guaranteed to be the product of Scotland. We can do this packed in barrels at 4d. per pound net, free on rails London, fourteen days' terms.

"Should this interest you, we hope to have your earliest reply.

Yours truly, ..."

We add a line giving, as requested, our opinion on the quality of sample sent. It is not, to our mind, so inferior in quality as our correspondent puts it, but so far as it being guaranteed to be genuine Scotch honey, we think the sample is, to say the least, incorrectly described—whether in ignorance or not we cannot of course say.

DERBYSHIRE B.K.A.

ANNUAL MEETING.

The twenty-fourth annual general meeting of the above association was held at the Town Hall, Derby, on January 28. The chair was taken by J. L. P. Barber, Esq., and Mr. R. Giles occupied the vice chair, the members present including Messrs. Stone, Bakewell, Bennett, Pallett, Henson, Abel, Martin, Ashworth, Sowter Hill, Richards, Pearman, Rowland, Swain, Durose, Brayshaw, Bollington, Garton, Smith, and R. H. Coltman, hon. secretary.

The minutes of the last general meeting were read and confirmed.

Mr. Coltman, the secretary, then presented the annual report and statement of accounts, which showed an increase of cash in hand from £9 6s. 4d. to £20 15s. 8d.

Owing to the unfavourable season the entries for the annual show were twenty-five per cent. less than in 1903. Subscriptions showed a slight advance, as did insurance fees and sale of county labels.

The experts reported having visited 124 members and 57 non-members in the Northern division, and examined 600 frame-hives and 64 skeps, finding 12 apiaries affected with foul brood, the diseased stocks numbering 20. In the Southern division 239 visits were made, 181 of these being to members; 759 frame-hives and 83 skeps were examined. In the spring four apiaries had foul brood, the number of diseased stocks being 11; in the autumn, however, 31 stocks were found affected.

The present membership is 295 against 313 in 1903; there had been 31 new members enrolled and 49 removals from list.

The report and statement of accounts were adopted. Votes of thanks were passed to the County Council and the Derbyshire Agricultural Society for their grants to the association.

The officers of the association were then elected, his Grace the Duke of Devonshire being re-elected president.

Messrs. Abel, Martin, and G. Richards were elected on the committee, vice Messrs. Burgin, Poland, and Burdett.

The Hon. F. Strutt, J.P., was re-elected hon. treasurer, as were also the hon. auditors and the hon. secretary. The local secretaries were re-elected with the alteration of Derby, Mr. J. Pearman, vice H. Hill. Messrs. T. W. Jones and R. H. Coltman were appointed representatives at meetings of the B.B.K.A.

The question of foul brood was then brought forward by the hon. secretary reading a letter on the subject from the secretary, B.B.K.A., and the hon. secretary was asked to write to Mr. Young, saying that the association were in favour of legislation, but the question of supporting any particular (proposed) Bill was not gone into owing to time being too short for proper discussion. The meeting closed with a hearty vote of thanks to the chairman. — R. H. Coltman, hon. secretary, Burton-on-Trent.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5790.] The month of February has opened with a few mild sunny days during which our bees have been able to take free flights, arrange their food supply, and in many cases no doubt breeding has started too. I judge this to be so by the number of bees at the watering-troughs, which have been covered with bees, and I have had to give a fresh supply of water each day, the bees continuing to carry it off till nearly 5 p.m.—unusually late at this time of the year.

We all owe thanks to Mr. R. F. Holtermann for his letter on page 44 last week. We objectors to foul-brood legislation on this side would rather bear the ills we have than fly to others we know not of.

In reply to request of your correspondent "J. W. L." (5789, page 48), who asks how I helped my skeppist neighbours, I have on more than one occasion given the same advice to readers of the B.B.J., how to clear out foul brood in skep apiaries—i.e., use new skeps for your swarms every year and thoroughly scrub your stools or stands with "Condy's Fluid." Then burn the old skeps after "taking-up" time; never put them outside to be cleaned up by the bees. This done regularly, and in a year or two the pest will be cleared out; unless re-introduced by robbing-out stray swarms. I have recommended B.K. Associations to give the new skeps to cottagers. They can be procured at 10s. to 12s. per dozen, and the poor cottager would gladly accept the practical help and advice of his better-informed neighbour. We must not forget that the wider the honey-bee is scattered, the greater the chance of a better crop of fruit of various kinds and also of farm seeds.

We are apt to forget the very great and important part our little labourers take in the economy of Nature. Some may remember the yard square of white clover blossoms left to seed, one open to bees, the other under gauze. One yard produces two thousand odd fully developed seeds, the other a few abortive sterile seeds only. The same with apples. Every blossom requires five distinct fertilisations to produce a perfectly formed apple. Those apples which are out of shape, if cut transversely across, will contain perhaps three plump pips and two thin undeveloped pips. This shows that only three fertilisations took place instead of five, probably owing to climatic influence, or there may have been honey in only three of the five nectaries. The same applies to bush fruit also, because if bees, through distance and cold weather, are unable to visit the gooseberry blossom, there will be no fruit.

Artificial pollen receptacles will soon be required if the weather remains open as now. I noticed to-day bees visiting the white arabis, a few flowers having burst into bloom. I always use straw skeps for the purpose of pollen-feeding. A handful of the fine shavings used for packing is a good material from which the bees can collect the flour. I use half pea and half wheaten flour sprinkled on the shavings with a dredger. Another method is to fill some clean tough old combs with the flour, and hang them in an empty hive; the bees in quest of pollen will soon find out the supply, which should always be placed in a warm sheltered position, so that the bees may enjoy the energising heat of the sun.

During the winter months mice will often make themselves very comfortable

quarters among the wraps and covering on the top of straw skeps; therefore when bees are flying freely, it is advisable to remove the covers and see if such is the case. Sometimes the mice will even make their nests inside the hive if there is room for them to pass in and out easily; and when their nests are outside they will go inside the hive for honey and damage the combs by nibbling holes in them.

We have not heard anything so far yet about the wide top-bar to frames mentioned last year. Will those bee-keepers who have given them a fair trial kindly give their experience so far as to good or bad points? I had no opportunity of trying them myself last season, as I sold every swarm that came off. I only tried three or four wide frames with a cast, but these small lots late in the season rarely do such good comb building as a good-sized early swarm.—W. Woodley, Beedon, Newbury.

MY GLASS-SIDED HIVE.

[5791.] Two or three years ago, when first smitten with the "bee fever," I made an observatory hive, of a kind—viz., one with three sides of glass—for my own instruction and amusement. It was not a very finished performance as a piece of joinery, but it answered my purpose. The hive was made to hold eleven standard frames in body-box, with room for two racks of sections on top for surplus honey storing. In the spring I united two weak stocks—one of which had just turned out a dead queen—and commenced feeding. This united colony did very well, for they gave me two swarms and about twenty pounds of surplus honey, which is reckoned very good for a Lancashire district, where most of the fields around are entirely void of bee-forage. The following are a few of my observations gathered from countless visits paid at all hours of the day to my observatory hive.

Light.—Bees are very sensitive to light, and when busy at work do not seem to like it. They get excited, rushing hither and thither, and often resent any attempt to examine the hive's interior. Whenever I opened the back door they became almost mad, and unless I desisted in my attempts to examine combs I got more stings for my pains than was pleasant.

Heat.—As the summer advanced the heat in the hive became very great, the glass feeling almost hot to the touch. When winter came on, the interior must have been quite cold, so far as could be gathered from the touch of the glass. Of course, there was always some warmth just round the cluster. I could see no bees then, as the cluster would be quite away from the glass in the middle of the hive, under the warm coverings of chaff-pillows. I ought to mention that there were outer doors to the hive, so that the glass windows were not exposed to the cold outside.

Swarming.—It is rather amusing at times to read in bee journals about swarming and its attendant evils; some write and talk as if swarming was the greatest trouble connected with bee-craft that a bee-man has to contend with. As well say it is the greatest evil in the world for married people to have children. It seems to me that if a man kept an observatory hive he wouldn't wonder why bees swarm, on seeing, as I did, bees tightly packed in every inch of space and hundreds hatching daily, with eleven combs full of brood and eggs, and two supers on top equally crowded with bees; he would know that bees must swarm from sheer want of room.

The Queen.—Only once during the whole season did I see the queen, and that was in the autumn, after two swarms had issued and all surplus honey was removed. I saw the mother-bee taking a walk quite alone on the outside comb next the glass. No surrounding attendants were offering her food—as some text-books picture her—nor was she egg-laying. About a fortnight after this the queen was turned out dead, so I joined the bees to another lot in an ordinary frame-hive. Thus ended my first year's experience in "observing."

I have still the observatory hive in my garden, but another lot of bees live there now, and I find if you wish to make your neighbours take an interest in bees and bee-keeping, buy or make an observatory hive, and invite them to come and see the bees at work. You will be surprised what pleasure and astonishment appear in their faces as they see the bees coming and going, running hither and thither among the combs like the busy little labourers they are.—H. Berkley Score, F.R.G.S., etc., Lancashire.

FORCED SWARMS.

[5792.] On page 469 of the British Bee Journal of November 24 is an extract from the *Journal* of the Department of Agriculture of Western Australia on what is said to be a "Canadian method of swarming." I have carefully read this article and must say that I consider it anything but a satisfactory or economical way of obtaining increase or of preventing natural swarming. Moreover, I feel sure that many experienced bee-keepers will agree with me that it is a most wasteful way of attempting to obtain the desired end. A strong colony that is preparing for swarming is to have the frames taken out, one at a time, from the brood-chamber, and shaken "almost free of bees," and then be placed in a new

hive; the combs as taken out are to be replaced with frames having starters of foundation. The hive containing the swarm is to remain in its original position. The new hive containing the brood is then to be placed behind it. Now it appears to me that in all probability the few old bees left with the brood will on their first flight not return to the new hive at all, but to that they are accustomed to; and as some days must elapse before the hatching young bees are able to perform the duties of nurses, feed the larvæ in the queen cells, and that in the combs, or in sufficient numbers to keep up the temperature of the hive, necessary to hatch the brood out; in the meantime the larvæ would be chilled or starved. It is a well-established fact, I believe, that a large proportion of the young brood invariably perishes when removed as above outlined.

The plan of artificial swarming I have adopted this year with success is far better than any of those I have previously tried. It is that recommended by Mr. E. L. Pratt in his small pamphlet called "Increase," a copy of which he tells me he has sent to you, Messrs. Editors. A new hive, containing five frames of worker comb pushed up to one side with a division board, is fastened with two nails, and a half-inch space left at bottom. The top must have a sheet of enamel cloth tacked with four nails over the frames. The cover on the space not filled with combs is turned back, to give room for shaking the bees into the open space. The bottom must be fastened to the hive and the entrance covered with a piece of wire cloth. These combs should have a little honey in them but no brood.

The strong colony from which the bees are taken is to remain in its old position. The bees from four or five frames of brood are shaken one at a time into the new hive, where they will run under the division board and up on to the combs. The cover is then turned back and made secure. Care must be taken not to shake the queen from the old hive, and queen cells must be cut out. All the brood combs are returned to the old hive, where all the brood will surely develop, and in two or three hours the bees will be working as if nothing had happened. The hive with queenless bees should be put in a cool dark place and remain there until the evening. A laying queen may then be safely run in under a corner of the quilt, and all made secure. In order that the bees shall not return to the old hive they should if possible be taken at least a mile away before the entrance is opened, and left there for two or three days, when they may be brought back without fear of losing any of the bees. Should it not be practicable to remove the hive to a distance, the swarm may be kept in a cool dark place for two or three days before setting them out, but the former place is better. If there are no spare combs at hand, four frames of well-wired foundation and one comb of honey may be substituted. If they are unable to gather honey the swarm must be fed. If increase of colonies is desired this may be repeated in a fortnight without materially affecting a strong colony.

The above is a brief description of Mr. Pratt's method, but his pamphlet goes very fully into the minutest detail, so that any novice could successfully adopt his plan.—JOHN M. HOOKER, Philadelphia, U.S.A.

(*Correspondence continued on page* 56.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Phillips, seen in his apiary on opposite page, needs no introduction from us, the following notes written at our request requiring no addition unless it be to wish that the cheery little chap, with a stocked skep for a garden seat, may become as good a bee-man as his father promised to be. He says:—

"I send you a few notes of my, as yet, brief career as a bee-keeper. In the spring 1903, I knew as much about bees as they knew about me. I only knew they could sting, and soon got unmistakable proof of this. Some people told me they never could make bees pay, while others said they did if properly managed. However, I was at length persuaded to try my hand with them, and I have never repented, for they have been profitable beyond all expectations. I started with one stock, and it did well, for I made over £2 for honey taken from them. I soon got the proverbial 'bee fever,' and, as usual, was not satisfied till I had increased my stocks. About the middle of last season I sent for a new hive, bought a swarm from a neighbour, and managed to get about 10 lbs. of surplus-honey from it. Then in the autumn I bought four skeps of bees, with their contained honey, etc.; two were that season's swarms, the other two being old stocks. These latter I drove, and joined the bees altogether, and put into a semi-observatory hive, which I had made just before, so that I could study the bees' ways, etc., without disturbing them.

"I felt a bit nervous when operating on the first lot as I had never seen bees driven before, but I followed the directions in 'Cowan's Guide Book,' and got through the job all right. That made up three stocks in all, which got safely through the winter of 1903.

"In the spring of last year I bought two more stocks in frame-hives from a man giving up bee-keeping, the two hives and bees only costing me 18s., and they both did remarkably well, as you will admit when I say that from one I secured 95 lbs. and a second prize, and from the other about 80 lbs. of honey and two first prizes for sections. So these hives have paid me back six times over or more. That brought my number of stocks up to five to start the season of 1904 with. I sent you an account of this season's takings, so I need not repeat it.

"I had a rather funny experience of swarming last summer, which may be of some interest: One day I went to see if there were any signs of swarming, as the day was exceedingly hot; but I found the bees in all hives busy at work, and not a sign of swarming. I was just coming away, when all at once I heard a tremendous buzzing, and looking round, I saw the bees rushing out of one hive in thousands! Not wanting this stock to swarm, I picked up a small pan of water that was handy, and threw it (the water) into mouth of hive. Well, that dousing seemed to stop the outrush, so I got more water and swished it up among bees circulating in the air above. I kept doing this till most of them returned to the hive; I then took the drawer out (it was one of Taylor's non-swarming hives, with a drawer below the brood nest) —but I do not use the drawer, in fact, I was advised to discard the under-part arrangement as it used to crush so many bees in pulling the drawer in and out, no matter how careful you were. Well, this gave the bees room, they hung to the bottom of combs just like a swarm on a branch. I then opened hive and cut out all queen-cells (ten in number), and put two new frames of foundation in, and gave another rack of sections (they already had two racks on then nearly full); I then used the smoker pretty freely and drove the bees up among the combs. A friend called (an experienced bee-man) just as I had finished, and he told me 'they would be out again soon'; but I am pleased to say his prophecy did not come true, they never gave any more signs of swarming after that.

MR J. E PHILLIPS' APIARY, ASKHAM RICHARD, NEAR YORK.

"None of my bees have swarmed yet; I do my utmost to stop them, as I can get as many swarms as I want from other sources. Next season, all being well, I shall try my hand at queen-rearing, so as to requeen my stocks as required. I have seven stocks to start with next spring, that is if they get through the present winter safely, and I think they will, for I believe in keeping my bees warm and dry, and seeing they have plenty of stores. Two or

three shillings spent in extra precautions is a £1 saved later on. In fact, I have always found it so in cases where live stock is concerned. Three of the hives I made myself, and all are precisely the same size, so that all parts are interchangeable. I believe in having everything of the best, well made, easy to handle, and clean."

CORRESPONDENCE.

(*Continued from page* 54.)

NOTES FROM GLOUCESTERSHIRE.

BEES BUILDING SQUARE CELLS.

[5793.] Whilst melting up the accumulation of odd combs and scraps of wax recently, I happened to find a piece with square cells instead of six-sided ones. This had been built by a very late swarm of black bees hived in a cheese-box, and which had been fed with sugar to promote comb building. During August, the heat and insufficient ventilation caused some comb to fall, and amongst it was this piece. Whether there is any more in the hive, I do not know. Owing to its having been rather crushed in the wax extractor, whilst waiting to be melted down, only about a quarter of an inch of the walls on each side remain. The piece has never had brood in it, so the exact angles and shape of cells can be most clearly discerned. There are two rows of square cells, then two of regularly-shaped five-sided cells, and then three more rows of square cells. On the other side of the comb, forming the base of the first two rows of square cells, are regularly-shaped five and ordinary six-sided cells, and forming the base of the two rows of five-sided cells are other five-sided cells, but on the other side of the three rows of square cells are other square cells. Parts of the bases of the square cells on the one side form the base of the square cells on the other, and meet exactly in the centre; thus, when the comb is held up to the light four miniature squares are seen to form the base of one cell. The four, five, and six-sided cells are clearly defined, and the square cells are considerably nearer a perfect square than those illustrated on p. 185 of "The Honey Bee," which are more in the form of a rhomb.

I cannot see that there was any obstruction or peculiarity of shape in the hive or other combs to give a reason for this shape of cell and the piece of comb is even. When the bees are driven from this box I shall examine all the combs carefully, and if I find any further peculiarity I will not fail to let you know.

Is this the result of degeneracy, or are these bees "speculative builders"? Perhaps "D. M. M." can say.

Should you wish to see the piece of comb, I shall be pleased to forward it for your inspection. A great many locally have been interested in this. — J. H., Stonehouse, Glos., January 31.

BEES AND HAZEL CATKINS.

[5794.] Referring to Mr. J. Skinner's letter on the above (5772, page 29), I would say with regard to bees and hazel catkins, it often happens that frosts blacken them just as they are in flower. But granted a few fine days without night frosts, bees certainly do collect pollen from them. They also collect it from the humble chickweed and groundsel. I also note that on the question of cleaning wet combs after extracting, some bee-keepers think it the right thing to expose the frames of comb where bees can freely get at them. This, in my experience, almost certainly induces robbing; if not amongst your own colonies, it will induce your bees to rob your neighbours, or vice versâ. It is far the best to replace the box of wet combs on the same hive it was taken from, and turn up a small corner of the quilt, placing the super over so that the bees cannot get into the open part of the hive. The super should of course have a quilt on top and be placed on hive after bees have done flying for the day. That is my experience. But a neighbour who exposes his gives me a rather anxious time.—PRACTICAL EXPERIENCE, North Bucks.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Sugar in the Apiary.—We find in the *Rheinische Bienenzeitung* a report of a paper read by B. Hündgen at the meeting of the Rhine Bee-keepers' Society on the value of sugar in the apiary. The writer says that sugar should only be used as food for bees when brood-rearing has ended, and should be substituted by honey as soon as brood-rearing commences. He says that as sugar is not completely converted into grape sugar, and that a considerable proportion of it remains as cane sugar, which the bees are not able to convert, it is injurious to the larvæ, and can only partially replace honey.

He also denounces the method of feeding bees on sugar-syrup to produce honey. He says that this can only be looked upon as a fraud, because, as he points out, the bees can only convert a portion of the cane sugar of syrup into the grape sugar

of honey, whereas in the nectar from flowers practically the whole of the cane sugar is converted into grape sugar and fruit sugar. Sugar honey in no way resembles real honey, which also has the distinguishing aroma of the flowers from which it is gathered, due to the ethereal oils they contain. It is this complete change of the nectar that makes it so wholesome, as it requires no digestion. Bees are not able to completely convert the cane sugar syrup, hence it is more indigestible, and is no substitute for honey. He called upon the Society to denounce the practice as adulteration.

We are glad to find that at last bee-keepers in Germany are beginning to find out the injury that has been done to bee-keeping by using sugar in this way, and we hope that they will also soon discard the use of so-called "fruit sugar," which is nothing but "glucose" under another name.

Water for Wax-melting.—The question is asked in the *Schweitzerische Bienenzeitung* what sort of water should be used for melting wax. The reply given is that in argillaceous and sandy soils, spring or well water should never be used. This water frequently contains ferruginous matters, which discolour the wax. Only with rain water is it possible to obtain a pure product of a good yellow colour.

Bee-keeping in Palestine.—An interesting account of bee-keeping in Palestine appears in the *Bulletin de la Société d'Apiculture de la Somme*. The writer says that up to 1875 bees were in a wild state in that country, as swarms settled in cavities of rocks and hollow trees. The natives used to look for them and destroy them for the honey, which has always been a staple article of food among the Arabs. A few of the more intelligent had hives in the form of cylinders made of clay and cut straw, and the bees in these were destroyed to obtain the honey. Things changed in 1875, when a European family [the Baldenspergers, from Alsace.—EDS. B.B.J.] commenced bee-keeping in movable-comb hives. Many of the natives have adopted this system, but have not yet obtained as good results as the Europeans, either in quantity or quality.

Nectar is abundant in Palestine. The first harvest, which is the most important one, is in April, at the time of the flowering of the orange trees; the second is in May, from mountain flowers and lavender and rosemary; and the third in June, from thyme. A good hive will give 90 lb. to 100 lb. of honey.

The honey produced by the Arabs is consumed in the country, but the 50,000 lb. of honey produced by the Europeans are exported to Europe, principally to Germany, where thyme honey is especially appreciated. Wax is not exported, but is used in Jerusalem for making candles, but there is not nearly enough for this purpose.

The Europeans also do a considerable business in selling queens, as there seems to be a large demand for them from all countries of the world.

Pollination of Flowers.—In the *Bulletin de la Société d'Histoire Naturelle des Ardennes* we find an article on the pollination of flowers by insects, by M. Benoit. After explaining the structure of the blossoms and their special arrangements for fertilisation, as well as the difference between anemophilous (wind-fertilised) and entomophilous (insect-fertilised), he points out that usually in the case of the latter the stamens ripen before the pistils. Where the inflorescence is grouped as in racemes, the lowest flowers are the first to fade, and their stamens ripen before the pistil is fully developed. But the stigma matures at the same time as the stamens of the less advanced flowers higher up the stem. When bees visit such racemes they work from the bottom upwards. This is why a bee covered with pollen from another plant fertilises in touching them the stigmas of the lower flowers, after which it collects the pollen in visiting the upper flowers, and carries it to other plants.

There are, however, species where the stigma ripens first, and figwort (*Scrophularia nodosa*) is an example. This is the explanation for this exception: "*S. nodosa* is one of the rare plants only visited by wasps; its nectar is not relished by bees. Wasps, when they visit the flowers of a plant, contrary to the habit of bees, commence at the top and work downwards. It is, therefore, an advantage for flowers visited by wasps to have their upper stigmas ripe before the stamens."

WEATHER REPORT.

WESTBOURNE, SUSSEX,

January, 1905.

Rainfall, 1·26 in.	Minimum on grass 20° on 27th.
Heaviest fall, ·86 on 16th.	Frosty nights, 18.
Rain fell on 15 days.	Mean maximum, 43·9.
Below average, 1·22 in.	Mean minimum, 31·3.
Sunshine, 87·9 hours.	Mean temperature, 37·6.
Brightest day 18th, 6·5 hours.	Above average, 0·6.
Sunless days, 9.	Maximum barometer, 30·95 on 29th.
Above average, 21·7 hours.	Minimum barometer, 29·23 on 17th.
Maximum temperature, 54° on 5th and 7th.	
Minimum temperature, 21° on 27th.	

L. B. BIRKETT.

Queries and Replies.

[3661.] *Building up Weak Stocks in Spring.*—To-day (February 3) being fine, I took the opportunity of examining my two hives. As you predicted, the driven lot of bees in skep (obtained late last autumn), succumbed the other week, about two days before the frost broke up. Hard luck! Would that I had followed your advice and united them with the others. But as I wish to do the best I can with the remainder, I will carry out whatever you suggest. No. 1 hive contains a very strong stock on nine frames with plenty of stores (three combs of honey yet untouched). This colony increased numerically very much last summer. No swarm has issued, and I had an idea that they requeened themselves last autumn, but have no other guide than seeing a queen on the alighting-board go in and come out again. The combs, in three central frames, are interlocked, and it is difficult to examine. No. 2 hive contains a lot of driven bees obtained last autumn. They occupied four or five frames, more or less, but are now crowded on two. I have given candy on top of frames to assist them, and also to-day gave them pint of warm syrup-food (as you suggested to a correspondent last week). They did not take to it so readily as I expected. Can I assist No. 2 by means of bees or brood from No. 1, so as to put them in good working order for the summer? (I mean by putting a frame of bees from the strong hive into the weak one in the course of a few weeks.) I should have liked to utilise the "built out" comb in the skep, if possible. If I work shallow-frames for extracting in No. 1, will it prevent them from swarming? In which case the skep would be useful. I send name, and sign—APIS, Birmingham, February 5.

REPLY.—The safest course will be to rely on the strong stock for surplus-honey this year. To do as proposed, viz., rob the strong stock to bolster up the weak one, may spoil your harvest from both lots. Remember the axiom, "a strong stock beats three weak ones." If, however, it is shown that the weakness of No. 2 is not the result of a worn-out queen, or of disease, you might give a frame of capped brood to help on the weak lot in spring, when bees are wanted to cover brood in course of hatching. Do not, however, on any account sensibly weaken the strong lot when the honey-gathering time is on.

[3662.] *Candy Making.*—Having from time to time got most useful information from your paper, may I ask your opinion on the enclosed sample of bee-candy? I have previously bought what candy I needed, but to my mind the hobby loses half its charm if the bee-keeper cannot do everything for himself in matters whereon he gets directions in his bee-books. You would therefore oblige me very much by giving your opinion. I shall have more confidence in giving same to the bees after hearing from you. I enclose card and sign—YORKIST, Heworth, York, February 1.

REPLY.—Sample sent is by no means bad; but you do not say what recipe has been followed. Its fault is being insufficiently boiled, which causes the watery taste and rough grain. Well-made candy should be quite smooth and buttery in grain, like the fondant sugars used in chocolate creams, though rather more solid than the latter. We are sending you a small bit of candy cut from a sample sent by a well-known bee-keeper recently, to show how well-made candy will keep. The sample being two years old, you will be able to form your own opinion on it after examining.

[3663.] *Working with "Wells" Hives.*—I should be glad if you will kindly favour me with a reply to the following inquiry in your valuable paper, the B.B.J. Would you advise letting one strong stock of bees occupy both compartments, i.e., the whole double brood-chamber of a "Wells" hive (twenty frames)? At present only one compartment of the hive is in use, the other half being filled up with warm quilting. I send name and sign—WELLS, Hertfordshire, February 2.

REPLY.—Unless a second lot of bees with queen was hived in the second compartment, we should leave the latter unoccupied, as it now is. The whole principle of the "Wells" hive is to have two queens at work—each one using one compartment as a ten-frame brood chamber—and allowing the progeny of both queens to work in a super to which both lots of bees have access. If the whole twenty frames are used as a brood chamber, the probability is that a good portion will be used for honey storing.

[3664.] *A Novice's Queries on Signs of Spring Breeding.*—Will you please give me a brief reply to the following questions in B.B.J. ?—1. Do bees show any outward signs, at this time of the year, by which it is possible to tell if their queen is all right? 2. Do you advise the use of artificial pollen in early spring, if so, when should I start giving it to them? 3. Is pollen-gathering a sign that the queen is laying; if this is so, is it not rather early for breeding to have started the first week in February? 4. From what source could the bees be getting pollen now? 5. Is there any danger of robbing at this time of the year?

Thanking you for past advice, I send name, etc., and sign—A NOVICE, Glos.

REPLY.—1. To the practised eye it is easy to judge if a stock is not queenless. The novice must judge by activity of bees and by their carrying in pollen in early spring. 2. Yes, if there is no natural pollen near, but not otherwise. If needed at all start at once. 3. Yes, if carried in freely. 4. Willows, gorse, crocus, and most early flowering plants. 5. Early spring is almost as dangerous as autumn for "robbing," and it should be carefully guarded against.

Echoes from the Hives.

Newmarket, February 6. — Yesterday morning being fine, with bright sunshine, albeit the westerly wind had a keen edge —the bees availed themselves of the opportunity to take a grand cleansing flight, and for the first time this year made a systematic raid upon the watering-places, which indicates that breeding is under full way, and that the bee-season of 1905 has begun. And here let me advise novices to gently test the weight of their hives, and as soon as weather permits, take a quiet peep at the cupboard of those found suspiciously light. They will be surprised at the extent to which the stores of many packed down for winter fairly well provided for have diminished, and unless such stocks are promptly supplied with well-made soft candy a still more unpleasant surprise will be in store for them when April arrives.—C. H. BOCOCK.

A JAPANESE JAR OF HONEY.

Among other interesting things brought to the notice of Mr. W. F. Reid by various exhibitors—when that gentleman was collecting material for the report published recently in our columns—was a glass jar of honey on the Japanese exhibit, which, we were struck with, as showing the remarkable aptitude of the Jap in "catching on," so to speak, to what is best in whatever he undertakes. The illustration seen is from a photo taken of the jar of honey mentioned above, and it is certainly one of the daintiest things in this line we have ever seen. The stopper is of thick glass, and is covered with semi-transparent waxed paper tied above and below the neck of jar as seen; the string being hidden by a pale-green ribbon of figured silk tied in bow in front. Bee-keepers, who market honey, would do well to emulate the style as far as possible, for there was no sign of leakage, and the jar with its neat label in front is as tasteful for a shop window as can be.

JAPANESE HONEY AT ST. LOUIS.

THE MUSIC OF THE BEES.

At last we have turned the dark corner of the year, the "shortest day," and sunrise and sunset will be a minute or two earlier and later. It will be scarcely perceptible. For several days, perhaps, we may fail to appreciate the lengthening day. And not until early March we may hear that inspiring murmur. To me it is even more cheerful than the songs of birds. But skies are threatening, trees are naked, and brown leaves are skipping and rolling along the woodland drives, as if conscious of their mission to nourish and sustain the new growth—their work is not yet done, for they contain, in their withered age, the essence of plant food, gathered and sublimated from earth and sky.

But if one wishes, a month or two hence, to anticipate the spring, see the opening flowers, breathe fragrant airs, and listen to the soothing murmurs of countless bees, one has only to enter an orchard house. O! that music of the bees! in the heather and the gorse of the breezy common, among the golden rain of the hazel catkins, and in the primroses beneath. Then under the blossoming apple-trees of garden and or-

chard, while the rosy petals are falling like showers of pearls. By the wayside, when the whole air is full of the scent of blossoming beans and clover, or in the season of the greendrake at the open casement of an old inn I know of, when the lindens that border the little God's acre are huge green hives of busy bees. Aye, aye!" says that dyspeptical pessimist, "but the winter is yet to come." "Well," I answer, "it has come, and half of it has gone — gloomy, fog-laden November and dark December, and now comes the lengthening day."—LUKE COLLIS, in *Thë Echo.*

PRESS CUTTING.

GERMAN APIARISTS GET SUGAR FREE OF TAX.

After repeated petitions, German apiarists have at length persuaded the Minister of Finance to remove the tax on sugar used for feeding their bees. This privilege is granted on condition that the sugar be denatured with 20 per cent. of wheat bran and employed under supervision of the Excise authorities. It remains to be seen what effect this lightening of taxation will have on Germany's honey exports. As far as Great Britain is concerned, they have hitherto not been voluminous; of late years 1899 holds the record with 21,500 kilos., valued at £1,600. In 1901, the shipments dropped to 3,200 kilos., to rise again in the following year to 9,300 kilos. The new German tariff maintains the duty at the old rate, namely £1 0s. 4d.—*The Practical Confectioner.*

BEES AND BATS.

"A friend of mine sent me word that one bright sunny morning he was standing by his beehives doing a little gardening, when he became conscious of something that kept flying backwards and forwards over his head. He looked up, and then saw a small bat hawking about in the air. At first he took no particular notice of it, thinking that it was merely catching flies, and it is by no means an unusual thing to see the little Pipistrelle, one of the commonest and also one smallest of our British bats, flying about in broad daylight, apparently enjoying most thoroughly the warmth of the sun. But, at last, he thought he would see what the little animal really was after, and then he discovered that it was his bees. The bat caught as many as it could enjoy comfortably, appeared to swallow them whole with the exception of the wings, which it nipped off close to the body, and then disappeared, evidently seeking its usual gloomy retreat, till either it had slept off the effects of its heavy meal, or until the shades of night again enticed it forth together with its own and other species. **If any of my correspondents have ever noticed such a thing before, or if they have seen other kinds of birds besides those that I have mentioned attack their bees, I shall be much obliged if they will kindly let me know.**"

Notices to Correspondents & Inquirers.

*** Buying Land through Societies.—Referring to query 3656 (page 49), and our request for information from readers, Mr. F. O. Hills kindly writes as follows:—"If 'J. E. S., Streatham,' would apply to 'Homesteads, Limited,' 27, Essex Street, Strand, W.C., I think he would find what he wants; but I have no personal knowledge of the company named."

J. N. W. (Erlington).—Joining County Associations.—The Warwickshire B.K.A. has for its Hon. Sec. Mr. J. Noble Bower, Knowle, who will give you particulars regarding membership if written to. The syllabus for expert's certificate examinations can be had only from the Secretary B.B.K.A., Mr. Edwin H. Young, 12, Hanover Square, London.

CHAS. H. BOCOCK (Newmarket).—Bee Candy).—Your sample is an excellent candy, one of the best we ever tasted. To be in such soft condition as when received, after being made two years, is remarkable, we think.

MEL ROSÆ(Yarmouth).—Removing "Ekes" from below Frames in Winter.—The time for this is when hives have their floorboards cleaned in spring preparatory to the season's work.

W. F. (Havant).—Chapman Honey Plant.—We have sent some seed, and you will find directions for sowing in B.B.J. of December 1 last, page 480, which may be had from this office.

Honey Samples.

C. H. S. (Birmingham).—This is a good sample of the heather-honey of which large quantities are gathered in some parts of Germany. There are numbers of peasant bee-men who make a living from the produce of their bees gathered from the large tracts of heath-growing land. None of this honey is used for the table, being considered too strong in flavour for that purpose, but it is in great demand for making honey-cakes and gingerbread by confectioners in Germany.

ENQUIRER (Notts).—Your sample is, in our opinion, a South American honey. It may be genuine honey, but decidedly not English to our mind. The flavour reminds us of Chilian honey as imported.

Editorial, Notices, &c.

"FINEST SCOTCH HONEY."

TONS ON OFFER IN LONDON.

We are not surprised that the few observations we made in our last issue regarding the offer of a few tons of finest Scotch honey, by a London firm, in barrels at 4d. per lb., has brought forth a characteristic reply from a prominent Scotch bee-man, who is one of the largest honey producers in that part of the kingdom. Mr. Wm. McNally—whose letter appears below—is above all things practical, a fact well known to readers of our journals for over twenty years past. His moderately-worded letter is, therefore, all the more welcome because of its coming to the point at once so far as regards locating the county in Scotland where the honey has been gathered. His question is, moreover, so simple and easy to answer that the firm concerned will, no doubt, be able to settle the point at once, and by so doing may—all other things being as stated in the letter quoted—secure a customer for a ton of honey at the price stated. Mr. McNally's letter reads as follows:—

"SIRS,—We Scotch bee-keepers have been treated to a surprise in last issue of B.B.J., page 51, by the announcement that Scotch honey is at present offered in London by the ton at 4d. per lb. Without more definite information, I think there must be some serious error in the statement, but I shall be pleased to hear from the firm in question, if they are prepared to supply me with one ton of 'finest Scotch honey' at 4d. per lb., stating at same time the county in which it was gathered, and enclosing a sample, with any other particulars.—I am, yours truly, WILLIAM MCNALLY, Glenluce, Wigtownshire, February 10."

Since the receipt of the above, we find our esteemed Scotch correspondent, "D. M. M.," makes a forcible reference to the above in his article on next page, and we shall take care that full particulars are brought to the notice of the firm whose letter, on page 51, has caused the commotion, and we shall hope to have a reply which will satisfactorily explain matters so far as the source where the honey on sale has been gathered.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of January, 1905, was £674.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

REVIEWS.

Baby Nuclei, by "Swarthmore," published by E. L. Pratt, Swarthmore, Pa.; crown 8vo, price 2s.—This is a neat pamphlet of thirty-two pages, describing what is known as the "Swarthmore" method of queen-rearing in nucleus-hives. For these instead of employing ordinary hives he uses small boxes taking from one to three small section-box combs with a mere handful of bees for the sole purpose of mating queens. The method has been described and illustrated in our pages, but this pamphlet contains additional information and more illustrations, which help one to understand its working. Special interest is attached to this pamphlet, as in addition there are fourteen half-tone plates from photographs by our old friend, Mr. J. M. Hooker, so long connected with the B.B.K.A., and who is now residing in Philadelphia, but who takes as much interest as ever in bee-keeping in this country by frequently contributing to our pages. It was he, also, who made us first acquainted with the "Swarthmore" method of queen-rearing.

Bee-hives and Bee-keepers' Appliances, edited by Paul N. Hasluck, published by Cassell and Co., Limited, London; foolscap 8vo, price 1s.—This little work of 160 pages is one of a series of handbooks edited by the editor of *Work*. It contains in a form for convenient use a comprehensive digest of the descriptions of hives and appliances that have appeared in the columns of the weekly journal called *Work*. There are four chapters dealing with hives, of which full descriptions are given, and the dimensions are set forth on the illustrations, and details figured. There are also chapters on observatory hives, smokers, extractors, and miscellaneous appliances, with full directions how to make them. To the amateur who is fond of making his own hives and appliances this book will be of use, as it contains 155 illustrations, and most of them have the various dimensions marked upon them.

Abeilles, Trésor des Montagnes, by the Abbé Gouttefangeas, The Hermitage, Noirétable, Loire; price 30 centimes (3d.) of the author.—This is an interesting pamphlet of forty-seven pages, divided into fourteen chapters, and is written principally for those inhabiting mountainous countries, where bees have to endure greater cold than in the plains. In it he explains why straw skeps yield such poor returns, and advocates the use of movable-comb hives, which are described and their manipulation explained. The practical work in the apiary during the whole year is given, and we are pleased to see so much information in so concise a form.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

"FINEST SCOTCH HONEY" (?): A PROTEST.

[5795.] I beg to protest in the most emphatic manner against the statement, or even assumption, that genuine Scotch honey (thanks for your interrogation mark, Messrs. Editors) can be bought wholesale, much less retailed, at 4d. per lb., as stated on page 51 last week. I could use very strong words on the subject, but they rarely do much good, so I will merely give my own experience to show that even clover honey sold at *three and a half times* that price. I disposed of all my clover honey at 10d. per lb. at an early date, sending consignments of over 100 lb. to Glasgow and even to Manchester. The latter was retailed at 1s. 2d., and the finish and quality secured a second order in amount about double the first, which, unfortunately, I was unable to fulfil, although I made inquiries from Scotch bee-keepers all round, as everybody had sold out at a good price. Some of those I appealed to named a smaller figure than 8d. for comb-honey, and most sold at 10d. I need not mention heather honey, as it went off at 1s. to 1s. 6d., and *tons* could have been disposed of at the lower figure. Now, if my honey can be sold (I take it as a typical case) at 1s. 2d. in the centre of England, does it stand to reason that "finest *genuine* Scotch honey" can be sold at a price which enables it to be offered wholesale at 4d. per lb.? There is "something rotten in the state of Denmark" if this is so. I said I would refrain from strong words, but this I must say, that I have not heard of any Scotch bee-keeper selling, even wholesale, at less than 6d., and I will be very much surprised if I do hear. I hope he will let me know his name and address! Let us have figures on the subject from John O'Groats to Maidenkirk, as a protest against the slur being cast on Scotch honey. Readers should inundate the B.B.J. office with their prices.

Celluloid for Bee-Keepers' Use. — About half-a-dozen years ago this material was introduced to the notice of bee-keepers by Mr. Walter F. Reid, and its praises were then sung somewhat enthusiastically by many, but I am not aware if it has established itself on a large scale in the hive interior. My attention was lately called to it by a visit I paid to an apiary where it is freely used, as quilts, dummies, queen-excluders, and for section-racks as windows. Indeed, it was very much in evidence about the hives and appliances. By its use I was enabled to have a peep at the denizens of about twenty hives, even on Christmas Day, without in any way disturbing the bees. Every hive had a winter-passage across frames covered with this substance, and bees could be seen wonderfully active for the season when any jar drew their attention to the fact that they were being spied on by strangers. I rather liked the idea all over. Being a non-conductor of heat its use for such a purpose must be better than glass. It does not snap as the latter does, nor does it condense moisture in the hive interior. I am inclined to substitute it in all my section-racks and crate-ends for glass. Honey seen through it looks very well, and bees working on surplus receptacles will appear to advantage. Perhaps some of those who use it extensively might give us their experience.

Frame Clamps. — The same bee-keeper has a clamp for his frames with which he fixes in the foundation rapidly and effectively. Being made on a gauge they bring just sufficient pressure on the frame-top to keep all taut until the bees build out their combs and get rid of any chance of a breakdown, when they can easily be slipped off and kept for future use. The idea is a good one, I think. It is cheap, easily applied, and seems effective.

Bee-proof Thread.—Has this material—also first brought to notice by Mr. Reid—proved a reliable substitute for wire in "wiring" frames when full sheets of foundation are used? I remember some years ago it was highly recommended as thoroughly efficient, our editors, amongst others, bestowing on it their approval. Again, a report on its success or non-success would be welcome.

Square Cells.— Every bee-keeper handling much comb will have noticed many irregular cells in the frames of most hives, but I have never seen any quite square, or even quite approaching that figure. Generally, I think, the great majority of these anomalies may be traced to faults in the foundation and not to the bees. Might I suggest that to the *breakdown*, mentioned by "J. H.," page 56, may be probably attributed these particular cells? I have noted a crack in brittle foundation at times results in transition cells, and a change from worker to drone comb.

Pollen Feeding.—As feeding will soon engross the attention of bee-keepers, I would call special notice to the excellent contribution of Mr. Avery on this sub-

ject, page 45. I have marked it for future reference, and will apply it an early date. I find that when bees get a fine day on the crocus blooms, if some of the artificial pollen is placed in the cups, they get familiarised with its use and more readily resort to the old skep redolent of honey, or the box with the piece of comb inserted as a bait. Young bee-keepers should carefully study the admirably-ingenious manner in which bees load up their pollen baskets from this artificial source. The action of the cunning little artificers is most interesting. A feeder is also on the market allowing of a supply of pollen when spring stimulating, being given inside the hive, a separate chamber being run off for its storage.

Bee Statistics.—That these are not always thoroughly reliable, the following showeth:—In a late issue of *Gleanings*, "Stenog," in one of his "Pickings," gave what professed to be a reliable table recording the number of hives in the different European countries. Amongst them, Russia was returned as possessing 110,000. A few numbers later, appeared something like a positive statement that they number 5,000,000—or nearly fifty times the other estimate. Surely someone has blundered! The discrepancy is too great, although one means Russia, and the other Greater Russia.—D. M. M., Banff.

EXPERTS AND FOUL BROOD

[5796.] Perhaps the most frequent objection which has been raised to proposed legislation against foul brood is the alleged danger of the dissemination of the disease by those who, in the event of such a Bill becoming law, would be entrusted with the responsibility of carrying out its provisions.

When one considers the extremely contagious nature of foul brood, caused as it is by a spore-bearing bacillus which is extremely resistant to the action of heat and antiseptics, it will readily be understood that the disease may occasionally be conveyed from one apiary to another by even the most careful of experts, just as any other infectious disease may, in spite of precautions, be carried from one house to another; but I hesitate to believe that this often happens, and I do not consider it a powerful argument against the employment of experts.

There is another way in which the expert may be the unwilling carrier of disease. It is at least probable that foul brood is sometimes present in a hive which is apparently perfectly healthy—that is to say, the disease is not *active*.

The conditions at the time prevailing in the hive may not be favourable to the rapid development of the bacilli, owing, perhaps, to the stock being too strong or the bees too vigorous and healthy; or, again, possibly to the presence of naphthaline or other antiseptic in the hive. Consequently the germs will be in the quiescent or resting state, i.e., there will be no bacilli present, but only spores, which, as we know, are far more dangerous to handle than the bacilli, owing to their great resisting power.

The expert, then, manipulating a stock in this condition, is facing an enemy which he cannot see, and incurs all the risks consequent on such an action.

This only emphasises the need for constant care on the part of the expert, who should handle all stocks as if they were diseased, and who should be assiduous in attention to details of cleanliness. And here let me remark in passing that the indiscriminate use of naphthaline may possibly not be the unmixed blessing we have hitherto considered it. Such an agent certainly does not kill spores, and probably only retards or temporarily prevents the development of bacilli, allowing the disease to again advance when the supply is exhausted. More important still is the surmise (for it is only surmise, though argued from knowledge of what does sometimes happen with other bacteria) that the disease may be masked by the use of naphthaline, and hence a false sense of security felt, much as a householder whose drains are offensive fancies he is doing away with the evil when he pours a pint of dilute carbolic or shakes a little carbolic powder down the drain, there to mingle with a few million gallons of sewage. He thinks that because he cannot smell it the nuisance does not exist, and so we are apt to think that because we cannot see disease it is not there, when perhaps careful bacteriological methods might reveal it in its most resistant form.

So far I have tried to show that the expert may sometimes be a medium for the transmission of foul brood, quite apart from any negligence on his part; but there remains yet another and more potent factor to be dealt with—the "dirty" expert.

In my own experience I have usually found experts to be conscientious in the discharge of their duties, and careful and cleanly in their methods; but without doubt there are to be found others to whom the adjective "careless" would more properly apply. Such men are undoubtedly a distinct source of danger to the bee-keeping community, as their very office admits them to so many apiaries and favours the rapid spread of foul brood. Such men should be weeded from the ranks of experts.

The existence, then, of certain dangers being admitted, as they will be, I think,

even by experts themselves, shall we not better direct our energy to devising means calculated to minimise them as far as possible, rather than employ our time in disparaging or condemning in a wholesale fashion the work of experts?

It is with this object that I venture to throw out one or two suggestions, hoping to invite further suggestions and criticism.

The B.B.K.A. issues its various certificates to those candidates only who, *at the time of examination*, are found to be proficient and up to the standard required. Obviously the Association—not keeping in touch with its experts subsequent to examination—cannot ensure their being always thoroughly up to date; neither can it guarantee that any individual expert will in practice carry out the theoretical knowledge he is known to possess. But there are certain regulations, which, if adopted by the parent Association, might go far towards eradicating incompetent or careless experts, and I venture to suggest the following regulations as tending in that direction:—

1. A complete register of experts to be kept by the Secretary of B.B.K.A. The register should state:—

(*a*) Name and address.
(*b*) Certificate held—1st, 2nd, or 3rd—with date.
(*c*) Appointment then held (if any).
(*d*) Previous appointments held (for the information of county secretaries, etc.).
(*e*) Record of any complaints, etc., and whether sustained or not.

2. The register to be revised once a year, and a copy sent to all secretaries of County Associations and County Councils employing experts.

3. All appointments to be notified by secretaries and by experts themselves for approval by Council of B.B.K.A.

This clause is intended to keep the register up to date, and also to safeguard secretaries and others against the employment of experts who may for some reason or other have been suspended or removed from the register.

4. Any expert to be liable to suspension or to have his name erased from the register for misconduct, inefficiency, or gross carelessness.

Every certificate issued to be endorsed to that effect. The Council of B.B.K.A. already have the power to *forfeit* certificates, but the case would often be met by a caution, followed on a second offence by temporary suspension, and subsequently by removal from the register. Moreover, it is not an easy matter to forfeit a certificate; I presume it cannot be taken away by force, consequently the regulation is inoperative, and there is nothing to prevent an expert whose certificate has been nominally confiscated by the action of the B.B.K.A. Council from using that same certificate to obtain fresh employment.

If, then, all County secretaries and others requiring experts will engage only those whose names appear on the register, as is the custom in most professions, the hands of the B.B.K.A. will be considerably strengthened, and "undesirable" experts will be gradually deleted.

If, as some appear to think, there are a considerable number of experts who are careless and slovenly in their duties, surely it becomes the duty of those who come in contact with them to report them to headquarters, so that the Council of B.B.K.A. may exercise their powers in the interest of bee-keepers generally.

5. Every expert, on receiving his certificate, to receive also definite instructions and suggestions as to the methods of performing his duties approved by the B.B.K.A.

These instructions should deal specifically with the subject of personal disinfection, and generally with the many ways in which an expert may make himself useful to his clients and advance the cause of bee-keeping.

6. Every expert should be required to register within a certain time of receiving his certificate.

A small fee might be charged on registration, to cover postage of fresh regulations and suggestions from time to time. Every expert should also be required to notify change of address.

The question of the personal cleanliness of the expert is one about which much has been written in the past; it is, however, a subject of such interest and importance that I shall be pardoned for reopening it to express views, some of which, founded mainly on a fair acquaintance with bacteriology and the action of disinfectants, I do not remember to have seen expressed in your pages.

It is advisable, I think, always to wash the hands *before* as well as after examining the stocks in an apiary. The reasons for washing beforehand are twofold:—

1st. To remove any germs which may have been accidentally deposited on the clothing and thence transferred to the hands.

2nd. As a measure calculated to inspire confidence in the owner of the apiary as to the careful methods employed by the expert.

It must be remembered that the owner did not see the expert wash on concluding his previous visit, but if he wash *before* commencing work, the owner has the evidence of his own eyesight, and knows that the expert is taking reasonable precautions.

At the present time there is, it seems, some lack of confidence in experts in certain quarters, and it lies chiefly with the experts themselves to show that this is unwarranted.

The hands should, of course, always be washed immediately after examining a diseased stock, even though the stock to be next examined should be known to be affected, and for this reason:—

It is well known that the virulence of different races of the same bacillus varies enormously. As in one epidemic of scarlet fever or small-pox most of the cases are severe, whilst in another epidemic the cases are chiefly mild, so with foul brood we sometimes see one apiary affected with a mild form of the disease, which apparently has little tendency to become severe, whilst another apiary may show the disease in its most malignant form.

This condition of mildness may be altogether apart from any consideration of preventive or curative treatment or of the natural immunity enjoyed by strong stocks of healthy, vigorous bees, but is undoubtedly often dependent on one or all of these conditions as well.

It will be seen, then, that it is quite possible for a malignant form of foul brood to be engrafted on a mild case owing to carelessness or want of forethought in this matter; therefore, I repeat, always disinfect the hands after handling a diseased stock or infected appliances.

As to the method of disinfection of hands, it is hardly practicable to go in for the same elaborate technique as is pursued by a surgeon for sterilising the hands before operating, nor is this necessary. Foul brood germs are all we are anxious to be free from, therefore what matter if we dry our hands on an unsterilised towel, though the latter may teem with other bacilli?—T. S. Elliot.

[*We are compelled to hold over the conclusion of Dr. Elliot's valuable paper till next week.*—Eds.]

BEE NOTES BY A BEGINNER.

[5797.] I began to think of keeping bees early in 1902, so first of all invested in the "Book of Bee-keeping," by Webster. I read this through several times, and found many difficult points becoming clearer as I re-read the work. A neighbour who possessed a skep promised me a swarm, so I hastened to follow the advice of "having the hive waiting for the bees, not the bees for the hive," and, in view of the future, purchased a "W. B. C." hive, veil, smoker, feeder, and other accessories. Having painted the hive well, and carefully set it out level, I waited patiently for the bees, but in vain, as they never swarmed. The time was not wasted, however, as I read all I could and made myself thoroughly conversant with the construction and working of my hive. I visited the "Royal Show" at Carlisle, and spent a lot of time among the bee-keeping exhibits, learning much that has been useful to me since. In the spring of 1903 I bought two stocks of native bees in boxes—not on frames. One of these stocks I placed above the frames of the "W. B. C." hive, and the other I allowed to stand as it was. All was going on nicely, and the bees had just commenced to draw out the foundation in the frame-hive, when, one hot July day, I carelessly left the roof off the hive, and the sun's heat melted all the comb-attachments. This caused such a wholesale destruction of bees as I do not wish to see again. I set to work, cut out the brood-combs and tied them into the frames; not an easy task for a beginner, but I managed it. This was such a set-back that I got no surplus from that stock, though they gathered sufficient for their own needs, and for those of another lot which I drove and united to them in September. The stock in the other box swarmed three times. Twice we hived the swarm, but both times the bees returned to the parent hive in the evening. The third time they clustered at the end of a branch of a tree more than 20 ft. from the ground. After trying in vain for two hours to get near the swarm we left off to have dinner, and on returning to our task found the bees had gone back to their old hive. A bee-keeping friend helped me later on to transfer them into a "Wells" hive which I had had given me, and they swarmed no more; but my troubles with them were not over by any means. Several times in August I examined the frames, and, finding no brood, concluded they were queenless. So I sent for a queen, but the "dealer" to whom I wrote neither sent a queen nor returned my money. Judge of my surprise, when, after a fortnight's absence from home, I looked in again and found a nice patch of brood! This stock yielded no surplus, but they gathered sufficient stores for wintering on. In January, 1904, I began to take in the B.B.J., and soon afterwards bought Mr. Cowan's "Guide Book" and "Honey Bee," which have been exceedingly useful to me. Last season I was not altogether free from misfortune, losing a fine swarm from the "W. B. C." hive early in June. I took the stock out of the "Wells" hive, as it needed some repairs, and put them into a single hive. This stock did not swarm, although I saw several queen-cells capped over. I can remember how pleased I was when I first saw a queen bee, having quite despaired of ever being able to find her among the hosts of workers. The calm way in which one is directed "to find the

queen and remove her" has caused me no little amusement, after having hunted all through the hive and never caught a glimpse of her.

I had a visit from our Association expert in July, and from him gathered much valuable information. I told him I was thinking of changing my strain of bees, as they were very vicious; but after he had looked in the hives he advised me to put up with a little bad temper, as they were doing very nicely.

Although 1904 was reckoned a bad year, I took over 90 lb. of comb-honey from my two stocks, which quite satisfied me, as I expected none from the "W. B. C." hive after losing the swarm. My home is in a valley near the "fells," and there are acres of heather within half a mile, but last year the honey from this source was a negligible quantity, owing to the cold, dark weather of August and early September. I disposed of forty-eight sections wholesale at 10d. each, but most of the others were unsaleable owing to the admixture of honey-dew.

Last September I drove three skeps and put them together in one side of the "Wells" hive, with my No. 2 stock in the other, as I was told they might winter better in the double hive. I now wish to put them into two hives of "W. B. C." pattern, and shall thank you to let me know when will be the best time to transfer, and also if I should place one hive on each side of the "Wells," put the bees in, and then take the "Wells" hive away.

I am looking forward to the coming honey season, which I hope will be a good one. There is no foul brood just here, but I have heard of it at places about five miles away, and trust it will come no nearer.—J. W. P.

[The two stocks may be put in separate hives any time during March or April. If the bees of both compartments of the "Wells" hive are clustered together on both sides of the perforated divider, it will be advantageous to leave them as they are till the weather becomes settled and warm, as they will now be mutually helpful in promoting breeding by clustering together for warmth.—EDS.]

BEES AND HAZEL CATKINS.

[5798.] Referring to Mr. Skinner's letter re "Bees and Hazel Catkins" (5772, page 29), let him come to the "Home of the Invalid" viz., Sidmouth—and I will show him, while the present delightful weather lasts, thousands of bees just revelling in "hazel catkin" blooms daily. Apart from even seeing the bees at work, could any one who studies the subject think for a moment that the bees would be foolish enough to leave these catkins, with their wealth of pollen, to perish without a visit? It may be, perhaps, that Mr. Skinner is in a neighbourhood where the bees have some *better* source of supply than the hazel catkins, and, of course, in that case, they would choose the better part.—F. J. G., Sidmouth, February 13.

WATER FOR BEES.

[5799.] Being a constant reader of the B.B.J., I see many things worth knowing, and I was wondering the other day, while watching my bees taking their supply of water, whether it would be of any interest to your readers to know the way I supply them with water. Seeing that they require such a large quantity at this season, it must be to the advantage of bee-keepers to see that the bees can get a full supply without losing their lives, so I resolved to try a new plan this spring, and I find it answers very well indeed. My plan is to place about half an inch thick of cork dust on the top of the water. This makes a perfectly safe drinking place for the bees to stand on. I poured some boiling water over the cork dust, thinking it might remove all impurities that might be injurious to the bees; but if there is no use in doing this, I will be glad to know. I have tried tea-leaves in shallow dishes with broken crocks in them, but a good-sized bath or pail, holding several gallons of water, used as above is far better.

I must also thank you for your past favours, especially for sending seeds of Chapman's honey plant, which I am now about to plant in my little greenhouse. I hope this will be a better honey season than last, especially round this district, as I got no surplus at all in 1904, while I got ninety 1-lb. sections from one hive the previous year.—G. D., Chelmsford, February 15.

HONEY-YIELDING FLOWERS.

GROWING FOR EDUCATIONAL PURPOSES.

[5800.] I must thank you for seeds of "Chapman's honey plant." It has occurred to me that a collection of the best honey plants might be grown for educational purposes, especially at schools where apiculture forms a part of the curriculum. During the coming summer I am anxious to try the experiment of growing such a collection, and I should be deeply grateful if you would kindly suggest a list of plants we might try. I send name, etc., and sign—NECTAR, Dunmow, Essex.

P.S.—I trust the Editors will be able to pay us a visit during the summer and see the results of our experiment

[We have forwarded a very full list of

honey-yielding flowers compiled by our Senior Editor some years ago for Messrs. Sutton and Sons, Reading, from which a selection might be made of the best, according to honey and pollen values respectively, as given. If an opportunity offers in the summer, we shall be very pleased to see the result of your experiment.—EDS.]

HELPFUL EXPERIENCES.

GETTING SECTIONS FINISHED OFF.

[5801.] I had a useful bit of experience that may help others:—I wanted some sections from one hive "which seemed the best and clearest," but they were only three parts filled, and very few of the sections were capped over. I wanted them for the show, which was in three days' time, and, as bad luck would have it, the weather turned dull and cold, and the bees would not fly. I was in a fix how to get these sections finished off in time for the show day, and this is what I did:—There were two racks of sections on; the top lot, which were rather dark, I took off, and bruised the capping of the six outside sections in the other super by drawing the flat blade of a knife over the combs, pressing on fairly hard, which broke the walls of cells, and started the honey to run gently. Next day I had a look at them. What was my surprise to find it was answering the purpose. The bees had shifted all honey from damaged combs, and, as luck would have it, they had not carried much down below, but had nearly filled the other sections, and several of them were capped over. The damaged ones they had mended up, ready for use again, but these I took out and replaced with some others, which I served the same. Next day I took super off, and found I had eleven splendidly-filled sections (I took one from another lot to make up the dozen), which, to my surprise, took two first prizes at show. I netted both firsts for sections, and second for extracted honey. Not so bad out of three entries, was it?

I am also fond of experimenting. I would spend £1 to get a shilling if I could gain the rest in knowledge. I examined hive next day and found brood-nest full of brood and sealed stores, so that accounts for the bees not storing much below, for no doubt some of the honey ran down into the brood chamber.

Do you think the following will be of any use to brother bee-keepers?—It is the way I make my quilts for covering. I send you one for inspection; it will explain itself better than I can on paper. There are, as you see, four or five thicknesses of felt stitched together; the under ticking is tacked on separate, so that it can be changed when covered with propolis. The extra size of felt on top can go between brood-box sides and lift or roof, as the case may be, or else fit extra tight to sides on the inside. The lid of feed-hole can be pressed in tight (and being stitched on cannot get lost or mislaid), then it does to cover supers. In fact, I find it answers all purposes, with very little trouble. I have only one quilt to handle instead of three or four. I have made similar quilts for all my hives; they are very little trouble to make, and any odd bits of carpet or felt will do; if one piece is carpet, it gives it a firmness which all felt would not. You have not to disturb the bees if you want to put a feeder on. The other thing enclosed is a winter passage way; it fits under the quilt, and you would hardly tell it was there. Any one can make them. All that is required is four narrow strips of wood and two bits of tin (cut from a mustard tin). If this is put right under feed-hole in quilt, feeders will stand quite firm. The other thing is a divider I put together. It answered fairly well, but as I did not try it under very good conditions, I cannot say if it will be a success or not. I shall give it a fair trial next season, and let you know the results. If any one else likes to try it, so much the better. The idea is to give the bees plenty of room and passage ways among the sections. I send stamps and should like you to send me the things back, any time at you leisure.—J. E. P., Askham Richard.

[The felt quilt is well adapted for the purpose, and for a careful, painstaking bee-keeper will be very useful. We fear that most readers will practise more rough-and-ready methods than yourself; but, all the same, tidiness is a great point in a good bee-man, and it is evidently one of your strong points. The divider will, we fear, be less satisfactory in working, though ingeniously contrived. The bee-space will be unreliable by reason of the thin zinc buckling and spoiling the bee-space in this way. A further trial will, we think, bring out its faults. The winter-passage is good.—EDS.]

ANCIENT BEE LORE.

[5802.] In glancing through an old book, published, I think, some time during the 18th century and entitled "Saxon Leechdoms," I came across two charms, "For Catching a Swarm of Bees" and "Against Loss of Bees," which have come down from our Saxon ancestors.

They may, possibly, already be familiar to you, but in case this is not so, I thought they might interest you and possibly some of your readers (if you care to publish them), so am sending you a copy of them.

— E. K. H., Brondesbury Park, N.W., February 10.

Copied from: — "Leechdoms, Wortcunning and Starcraft of Early England, being a Collection of Documents for the most part never before printed, illustrating the History of Science in this Country before the Norman Conquest."

"*Charm for Catching a Swarm of Bees.*

"Take some earth, throw it with thy right hand under thy right foot, and say: 'I take under foot, I am trying what earth avails for everything in the world, and against spite and against malice and against the wicked tongue of man and against displeasure.'

"Throw over them some gravel when they swarm, and say:

'Sit ye, my ladies, sink,
Sink ye to earth down;
Never be so wild
As to the wood to fly.
Be ye as mindful of my good, as every man is of meat and estate.'"

"*Against Loss of Bees.*

". . . A plant of madder on thy hive, then no man will be able to steal them, the while the plant is on the hive."

BEE-KEEPING AS A BUSINESS.

There are probably some readers of the *Review* who are keeping bees in a small way only; and there may be some of these who are thinking of going into the business extensively; and some of these may be asking themselves: "How shall I learn the business?" If there are any such, I know of no better advice than that given years ago by Mr. James Heddon in his book, "Success in Bee Culture." On this subject he says:—

"When one has decided to adopt bee-keeping as a business, the question may then well be asked, 'How shall I commence?' I will give you my opinions regarding the subject—opinions based on experience.

"In these remarks I shall suppose that the sole purpose of adopting our pursuit is that of making money at a reasonably agreeable calling. For all other classes I have nothing to say. But now let me consider the best way to get properly started in the business. With this, like all other pursuits, the very first acquisition needed is a knowledge of its laws and principles. With this knowledge you will know how to choose a good field. You will know enough to choose one that is unoccupied, and that you can likely hold sole possession of. Besides these basic principles, you will have an understanding of the detail manipulation of the apiary. Now, in my judgment, the best way to get possession of this knowledge, which is absolutely necessary to success, is to do just as you would if you were going to practise law, ship-building, rearing silkworms or speckled trout, viz., engage yourself with some experienced and successful business man of the same calling, and with him and his fixtures study the business both in theory and practice. You will get your theory from the best literature upon the subject, and social converse with your employer. This will increase your talent. You will get your practical knowledge, made up of thousands of methods, styles, and movements, by working at the business and among its fixtures. That knowledge will increase your tact. Now, the reason why I suggested the successful man only is because this tact is usually found in company with success—in fact, it is a parent of success, and is to a certain degree catching, and the ways and means adopted by the man of tact are authors of success.

"During this apprenticeship you must mingle your thought with you labour in a proper degree, for in the business you are as much a student as an apprentice. After you have spent one or two seasons (according to your aptitude) in this way, you are competent to start in the business, with a capital which will support you and yours, and command your best mental and physical efforts, for most of the year. If you have not the capital, you are fitted to command wages in advance of the common labourer, and if acquaintance has inspired your employer with full faith in your integrity, you can likely get all the capital you need, to accompany your strength and skill. Many offer bees for sale, but I want to tell you that if I could get competent, honest men to work for me, at wages hinted at above, or work an apiary on shares, I could make more by not selling a bee, but placing my surplus stocks in another unoccupied field, with this employee to handle them.

"I give it as my solemn conviction that no man should ever attempt this business that has failed in all others in which he has been engaged. The bees do not 'work for nothing and board themselves'; that 'small children' and 'invalids' are not eminently adapted to honey production. Experience has taught me that if there is any business in this world that demands industry, skill, and tact to ensure success, it is this of ours. By attending conventions, visiting bee-keepers, and entertaining many who visit me, I have learned that successful apiarists, as a class, are more than ordinarily wide awake and intelligent.

"The beginner almost invariably wants to know how many pounds of surplus honey he may expect from a hive in good season. Why does he not ask how many pounds in a bad one? Really, why does he not say how much is honey worth on the markets of the world? Is it likely to hold up to that figure? How much do you think it costs to produce honey per ton? Do you know of any good, unoccupied fields? About how many pounds of surplus do you think such a field would yield annually on an average? What would be the best number of colonies to keep to secure it? And a whole lot of such questions as these.

"Now, honour bright, would not these questions be more likely to be correctly answered by some experienced producer than any one else? If I should hear a young man asking questions like these, I would feel sure that he had served at least a year with some experienced apiarist, and not in vain either.

"I believe that no business is less adapted to becoming a side-issue or adjunct to some other than this of ours. On the other hand, I think it will become a specialty with the successful ones, and these men will be men of energy, intelligence, and tact.

"The days of dabbling along with two or four colonies, picking up bee-wisdom, throwing away one and making another style of hive each year, are nearly over.

"Seventeen years ago I began bee-keeping in this way. The production of honey has increased many-fold since that time, and the profits of the same have greatly decreased. Had they been no greater then than now, I think my attempts at apiculture would have proven a failure. I am positive that had I then apprenticed myself to some such successful apiarist as Adam Grimm, who, it is said, cleared $10,000 in one year from his large apiaries, I would, ere this, have no further need for bees, nor their product."—*Bee-keepers' Review* (American).

Echoes from the Hives.

Whitfield, Axminster, Devon, February 13. — To-day the sun has been shining brightly and bees were working merrily, so I took a peep inside four of my hives and was delighted with their condition. Three of them had started breeding nicely, and all looked full of promise. I am looking forward for a good year after noting the way in which they have been working. Wishing every bee-keeper a good year.—G. R. T.

Hildenborough, Kent, February 13.—On examining the combs of four hives, for a friend, in this village on February 4, I was pleased to find the bees all strong and doing well, three of the stocks having brood in all stages on two frames each, while the fourth and strongest hive had brood on both sides of four frames. This, I think, looks well for the coming season of 1905.—W. W.

Queries and Replies.

[3665.] *Advising Beginners in Bee-keeping.*—Will you kindly tell me what I ought to do with my wooden hives? I have had bees in them for three seasons. Should they be cleaned out; and if so, will you tell me when and how to do it? Is it advisable to use old sections which have had the honey cut out a previous season, and do you recommend using artificial comb? Apologising for troubling you.—K. C., Dover, February 8.

REPLY.—Hives stocked with bees require to be cleaned up and all débris cleared away from floorboards every spring, or before the busy season begins. As above queries clearly indicate you have had no experience in bee management, and read nothing on the subject, we strongly recommend the purchase of a "Guide Book," without which little progress can be made or success hoped for. It is quite impossible for us to teach beginners in the limited space of our query and reply columns.

[3666.] *Loss of Stocks in Winter.*—I extracted the enclosed sample of honey from combs of one of two hives, the bees of which died this winter, leaving me with only two of the four stocks packed last autumn. I thought that both of the hives in question had an unhealthy smell at close of the honey harvest, particularly the one from which sample of honey was taken. And the bees of latter appear to have died in hundreds, lying head foremost in the cells. There was over ten pounds of sealed food in the combs, but no brood, and the bees had hardly touched the syrup offered them in feeder, which, I am afraid, was too thin. The hive in question also contained a great many drones, which I cannot account for. I also found the queen dead in the middle of a cluster of dead bees. 1. Can you tell me the cause of death? 2. I should also be much obliged if you will say in B.B.J. whether the honey as sample sent is of any use for feeding purposes in the early spring. I would also like to know (3) if the best way to make good my loss would be to buy new stocks, or allow my remaining two

hives to swarm. I prevented swarming last year by putting supers on early. From four hives I got 160 lb.—not bad for this part of the country, I believe. All my hives are home-made, and one has a lead roof, so that it seems to get dangerously damp inside, so much so that I have to change the top quilts pretty often. 4. Do you advise stripping the roofs? Thanking you for the valuable advice received from the columns of your excellent journal, I send name and sign.—BIENEN-VATER, Roundhay, Leeds, February 9.

REPLY.—1. The symptoms point directly to starvation, but details given make it more than probable that the hive was queenless last autumn. 2. Sample sent is almost wholly honey-dew, and is only fit for bee-food. 3. If honey season is good this year you will wish to have stocks rather than swarms, and *vice-versâ*. It is a matter of choice. 4. Cut vent-holes at each end.

[3667.] *Best Locations for Heather Honey.*—Seeing that no one has taken any notice of my remarks and request under "Heather Honey" (No. 5746, page 8), I will feel obliged if you will give me your opinion on this—what I consider an important matter—viz., the best part of moors to send bees to.—A. R., Ross-shire, February 14.

REPLY.—The best moors to send bees to for honey gathering are those of the Scotch Highlands where the true ling (*Calluna vulgaris*) grows by the acre. It has been maintained, by those who are best informed on the subject, that the choicest heather honey is gathered in the higher altitudes, the flavour being considered by many to be superior to that gathered on the Lowland moors of Scotland and North of England.

[3668.] *Bees Found Dead in February.*—On looking at my bees I find one stock dead. They were well wrapped up, properly protected from cold and wet, and there was plenty of sealed honey in the last three frames, to which the bees had access. I may say there was no food on five front frames, which hang parallel to hive entrance. I found the doorway to hive quite stopped up by dead bees. I enclose piece of comb for inspection. Please reply as to its condition next week if possible.—G. H., Hinckley, February 8.

REPLY.—Comb sent shows no sign of disease, the cells being entirely devoid of either brood or food. Where dead bees are found by the dozen in cells, head foremost as in sample, it is a sure sign of death from hunger, and as the sealed stores in the hive were in the rear frames the bees have died through inability to reach the food. The objection to frames hanging parallel to entrance entertained by most experienced bee-keepers is fully borne out by the mishap to your stock.

PRESS CUTTING.

A LIVING HONEY-STORE.

The honey-bearing ant of Southern Mexico and Colorado works at night, storing the honey in curious fashion. After a foraging expedition on the plants of the Schrub oak, the worker ant, on its return, forces the honey by muscular contraction from its mouth into the crop and abdomen of the "honey-bearer." This crop is walled by ten muscular plates, and is capable of great expansion. When filled the abdomen becomes extraordinarily distended, the "bearer" resembling a sac of amber-coloured honey, with the head and thorax like small appendages on one side.

The "bearers" being rendered almost helpless by this change of condition, are carefully attended by the other ants, and kept in suitable compartments, where, clinging to the roof, they hang down like amber globes. The ants, as they need food, apply their mouths to those of the "honey-bearers," when a slight contraction of the muscles forces out minute drops which are licked off and consumed. These ants are used by the natives of Mexico as dessert to their feasts, the honey being extracted by pressure between the teeth.—*Pearson's Weekly.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

T. N. L. (Trelewis, Glam.).—Mead Making.—Your sample is a nice palatable mead for table use and, if, as we expect, it improves with age, it will be very good indeed, such as most consumers would appreciate.

M. S. (St. Ives, Hunts.).—Foul Brood Legislation.—Discussion on this subject being now by general consent closed for the present, it could serve no good purpose to publish suggested improvements on the Draft Bill now before county associations. New ideas will only add to the unfortunate "diversity" of opinion which you justly deplore. Therefore, the best—indeed, the only—course now is to get the opinion of county B.K. associations on the Bill approved by the committee duly appointed to deal with it.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, February 15, Mr. T. I. Weston occupying the chair. There were also present the Hon. and Rev. Henry Bligh, Messrs. D. W. Bishop-Ackerman, R. Brown, W. Broughton Carr, E. D. Till, F. B. White, W. Woodley, and the Secretary. Letters apologising for enforced absence were received from Miss Gayton, Mr. T. W. Cowan, and Mr. W. H. Harris.

The minutes of the previous meeting were read and confirmed.

Mr. Edgar Ernest Brown, Somersham, Hunts, was duly elected to membership.

The report of the Finance Committee was presented by Mr. Weston, together with a list of cheques required by the Committee, and was formally approved.

Applications for grants of medals and certificates were received from the Confectioners' Society, and the Royal Lancs Agricultural Society, and agreed to.

It was resolved to hold the Annual General Meeting on Thursday, March 16, to be followed as usual by a "Conversazione of Members."

A meeting of the Bee-pest Legislative Committee was afterwards held, when further replies from County Associations and County Councils were received. It was decided to address communications to County Councils in districts where no Associations exist (in affiliation with the B.B.K.A.), and to make a further attempt to get replies from other centres in the hope that the Committee may be able more nearly to ascertain the extent of support accorded in favour of the proposals.

THE CLAUSTRAL VENTILATED HIVE AND DETENTION SYSTEM.

It is quite time that the readers of this journal should be made aware of an addition to our hives devised by a French bee-keeper, Monsieur l'Abbé Gouttefangeas, who has recently described his system in a book of 272 pages, entitled "*Ruche Claustrante et Méthode Claustrale*," *J.-M. et J.-B. Gouttefangeas, published by Charles Amat*, 11, *Rue Cassette, Paris VI.*, 1905; *price* 3.50 *francs*.

From this interesting work, which has already attracted much attention, the illustrations that accompany the present article are taken.

By means of a thoroughly darkened and peculiarly ventilated ante-chamber, the inventor enables us at any moment to confine a colony to its hive without causing excitement amongst the inmates, who can be detained there under healthy conditions for a considerable period. The advantages of this power are many, and they will be considered later on. Not the least is that of being able to keep at home the eager workers who, yielding in early spring to the temptation of a bright and steely sky, sally forth never to return. Numbed by the cold wind, some perish far from the hive; others, missing the alighting board, fall to the ground. What bee-keeper has not grieved for these victims, many of them young and active and laden with pollen! M. Gouttefangeas, who resides in a mountainous district, attributes much of the dwindling that occurs in hive population both in spring and autumn to this mortality.

To confine bees in an ordinary hive without detriment is an impossibility. With closed doors they soon suffer from want of air and the heat caused by excitement, and are stifled. If perforated metal be substituted, they crowd towards the light and choke the entrance, which in any case must soon be encumbered by débris and the dead bodies resulting from natural casualties. The inventor of the "Claustral" hive meets the difficulty as follows:

His ante-chamber, placed in front of the entrance, runs the whole width of the hive, and may be detachable, provided that it be so arranged as to fit close on to the hive walls, or, what is perhaps better, may be part of the hive, as in Fig. 1. The ordinary porch forms the roof; two sides are added, or may be supplied by prolonging the outer walls of the hive; and the front is closed by the alighting board, which, working on a long hinge specially devised for keeping out the light, can be raised and pushed back till it fits into recesses cut in the sides and roof, and thus completes the darkness of the enclosure, and seen in Fig. 2, where a detachable detention-chamber is shown, closed as just described, the under side of the alighting board being furnished with battens to prevent warping. The dimensions of the detention-chamber used by M. Gouttefangeas are:—Width, that of his hive, $17\frac{3}{4}$ in.; mean height, $10\frac{3}{4}$ in.; depth, $2\frac{3}{4}$ in.; capacity about 7 quarts; but he particularly states that although he has given his system some three years' trial, with gratifying results, he prefers not to lay down definite rules for its application, which can be varied to suit any kind of hive.

So far, then, we have the means of producing an artificial night. The bees are not confined *within their hive;* they can patrol in front of the entrance in their usual fashion. There has been no cause for excitement, and at their will a fair proportion of the inmates can camp out-

side. Nothing is now needed but good ventilation to keep the colony cool and comfortable, and in this provision lies the chief merit of M. Gouttefangeas' invention, for the detention system is in itself no great novelty, having been advocated for some time past in Germany and elsewhere.

The desired result is achieved by using perforated metal chimneys and aerating channels of various kinds, but all so constructed as to be practically impervious to light. Two of the former are shown as in use in Figs. 1 and 2, and one separately in Fig. 3. About 1 in. in diameter, and 2 ft. to 2¼ ft. long, they are pierced in six or seven circumferential rows of from eight to ten bee-excluding holes each, with an interval of about nine-tenths of an inch between each row. Two chimneys, provided with movable hoods to keep out the snow, are used for each chamber, their position being about 4 in. from the nearest side of the chamber, and two-fifths of an inch from the front wall of the hive proper. They are inserted from above through corresponding holes in the roof and floor, and are fixed by some simple means, so that each end projects about 4 in. When thus in place the lowermost of the rows of holes pierced in each chimney should be just above the floor of the chamber, and close to the entrance of the hive.

In the experience of the inventor, two such chimneys suffice to keep the hive pure and fresh. Longer chimneys would produce a stronger draught, and may be used if not objected to as unsightly. For additional ventilation, aerated tubes and conduits may be employed, and arranged in any position in the sides, floor, or roof of the detention-chamber, or, as M. Gouttefangeas proposes, in any convenient place within the hive itself, or in the lifts or supers. Their exact shape is immaterial, but their universal principle may be gathered from the metal aerating door shown in Fig. 4. Most of the conduits are in one piece; the door is made in two, and the tube of one half projects so as to fit into the tube of the other and ensure exclusion of light. The tubes are square in section and open at each end, so that a current of air is always passing the perforations in that side of the tube nearest the hive entrance. The upper part of the doors

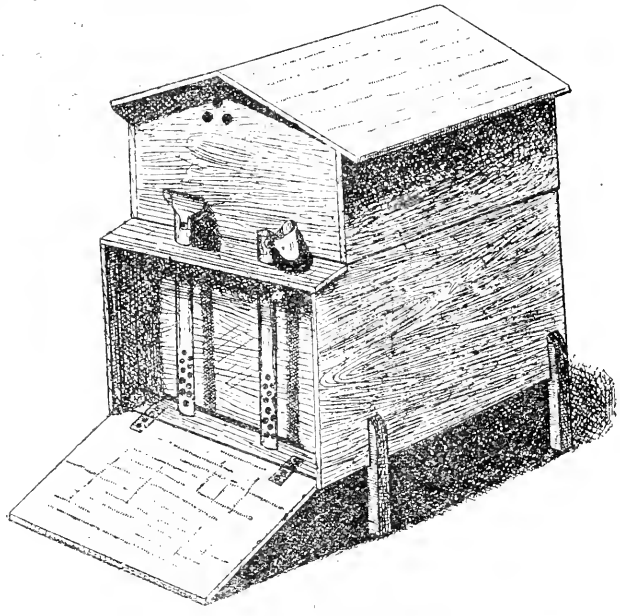


Fig. 1.—"Claustral" Hive (Dadant-Blatt) with Two Ventilating Chimneys.

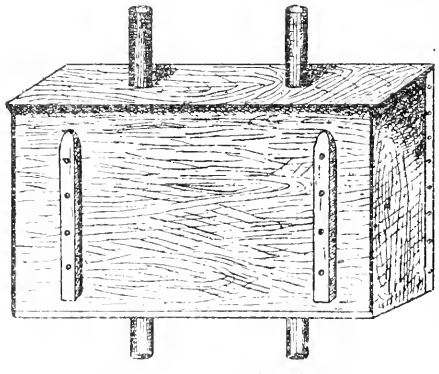


Fig. 2.—Closed Detention-Chamber.

runs in a groove arranged in the hive wall. Such doors may be used for temporary purposes, or for longer if combined with interior aerating conduits, but they do not take the place of a detention-chamber. Conduits for use within the hive are detachable for cleansing, and can be closed by metal slides.

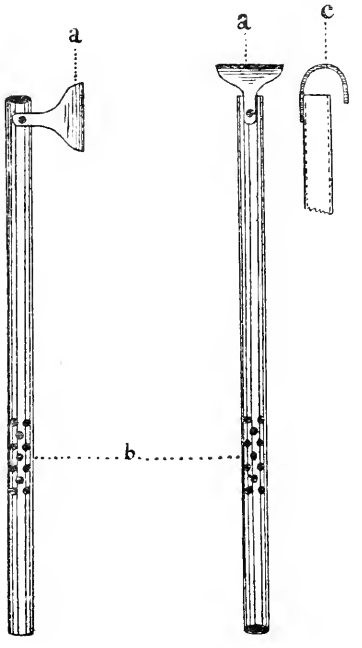


Fig. 3.—Ventilating Chimneys.

English bee-keepers will be disposed to view perforated ventilators with disfavour on the score of propolisation, and there is no denying that in the hive proper they will sooner or later be propolised, though the event may be delayed by smearing them with carbolised vaseline, or possibly there may be some better remedy. In the detention-chamber, outside the hive proper, propolisation need not be feared, and it may be said at once that M. Gouttefangeas has kept his hives closed right through the winter, and, the bees having been allowed an occasional cleansing flight, up to the main honey flow without detriment, and with no more ventilation than that afforded by the chamber itself. During such confinement the odour emitted by the tube, or the absence of odour, is a good test of the conditions within, while a further diagnosis is available from the concentrated sound conveyed to the listener on tapping the sides of the hive.

It might be supposed that a confinement prolonged well into spring would be prejudicial to early breeding and the general advancement of the colony, but if we are to credit our author—and his book, besides being very agreeably written, conveys an impression of thorough sincerity—the contrary is the case. Colonies so protected come out unusually strong, due care being given to keeping up a constant supply of syrup or sweetened water by means of the bottle-feeder. Previous quilts are recommended to assist in gentle aeration, while, as regards temperature, the antechamber seems to have a moderating effect. Although by the provision of Nature bees when in a state of quiescence are able during long periods to dispense with evacuation, it is well to allow them an occasional cleansing flight on favourable occasions, when the corpses that, owing to the usual casualties, will have accumulated in the antechamber can be conveniently removed. The less the excitement the less the consumption of stores and the necessity for flying.

Let us now consider the detention-chamber apart from its special service as a preventive of spring and autumn dwindling, and rather as a structural feature of the hive, an entrance hall generally standing open. In all cases where the temporary confinement of a colony is required so as to accustom the bees to a new situation the addition must be valuable. Such are:

1. To shift the position of a hive at any time and for any distance.
2. To cause bees to remain in newly established nuclei or in new habitations in natural or artificial swarming.
3. To stop robbing by confinement of either the robbers or the robbed, and this either at home or in a new position.
4. To confine certain colonies during manipulation, or when outside feeding is contemplated.
5. To enable a colony in case of bee-pest to be isolated and dealt with independently and effectually as regards feeding.

Comment would be superfluous. Claustral hives and detention-chambers adapted to all kinds of hives are manufactured

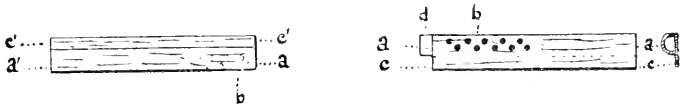


Fig. 4.—Two-piece Ventilating Door, one half being inverted. Elevation and Section.

under the French patent, and supplied by M. Gilbert Gouttefangeas-Charlat, of La Vernière, près Noirétable, Loire, France. I am glad to learn that Mr. Cowan is obtaining specimens and hopes to exhibit them at the B.B.K.A. annual general meeting in March next, when the merits of the invention and its adaptability to English hives can be freely discussed. M. l'Abbé Gouttefangeas, writing from l'Hermitage de Noirétable, informs me that he is prepared to dispose of the patent rights for Great Britain and Ireland.—H. J. O. WALKER, Lt.-Col., Leeford, Budleigh-Salterton, February 13.

[By the courtesy of the inventor we have been allowed to reproduce the accompanying illustrations from his book. These are copyright, and must not be reproduced. We have also in preparation a series of illustrated articles describing the system more fully.—EDS. B.B.J.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[5803.] The fortnight of mild weather has invigorated our bees with new life, while the sunshine has opened the crocus-blooms a month earlier than usual; the increasing numbers of bees at the watering-places also show that breeding has commenced in many colonies. In our own apiaries artificial pollen (pea flour and wheaten flour mixed) has been sprinkled on a few wood-shavings in an old skep and placed in a sheltered, sunny spot. A hasty glance at a few hives in my out-apiary showed some good-sized patches of brood, and an extra wrap was carefully tucked over the others already on for adding to the warmth. It is a good plan at this season to pack down closely sheets of newspaper over the quilts for keeping bees warm at this season, covering the frame-tops carefully before replacing the loose wraps or chaff-cushions to prevent any loss of heat from the brood-nest; also close the entrance of hive to 1½ in. for the next month.

Bees and Hazel Catkins.—After careful watching, I have never observed bees working on these catkins in this part, and have thought it strange on seeing the large amount of pollen going to waste when the March winds have shaken the plentiful pollen-grains into the vertical flowers of the hazel. Nature, however, has thus provided the method of pollination without the aid of the insect in the production of nuts. It cannot be safely said that bees never visit or collect hazel-pollen; but after many years' watching I have failed to find a single bee working on the catkins.

Scotch (?) Honey.—Thanks, "D. M. M.," for your protest on page 62. I trust the source of this parcel of honey may be traced, so that bee-keepers and honey-consumers may be informed as to the district in which it was gathered, as requested by Mr. W. McNally on page 61. The price it is offered at, in my opinion, points to over-sea production, where rent, rate, and tax collectors bother not, and honey-flows last for the best part of the year.

Watering Troughs.—The watering method described by "G. D." on page 66 answers very well. I have had two milk-pans with shredded corks floating as a platform for the bees. I have already started one of them this year; but I must say that my bees unmistakably prefer the tea-leaves to the corks. I would suggest to "Nectar" (5800, page 66) that he not only plants his own parterre with bee-flowers, but also gives freely of the surplus plants to his neighbours; but it is from the broad acres we get our real honey-flow, while the greatest help we get as bee-keepers is from the early spring-blooming flowers that are helpful in supplying pollen and some nectar before we get the field-forage from which the main crop comes.—W. WOODLEY, Beedon, Newbury.

CELLULOID FOR BEE-KEEPERS' USE.

[5804.] The interesting letter of your correspondent "D. M. M." in B.B.J. of February 16 reminds me that about ten years have now elapsed since I first used celluloid quilts, and my experience may be of interest to bee-keepers generally. In my first communication on the subject, in 1899, I mentioned the thickness of the celluloid I was then using; but since then I have found that, under certain conditions, sheets of that thickness are apt to buckle, and for general use it is perhaps preferable to use a thinner material. The sheets I now use are about as thick as two pages of this journal, and so pliable that no difficulty can arise from buckling. Even with the thicker sheets, a strip of wood about one-eighth of an inch thick laid upon the edges ensures good contact with the frames. It is a very great advantage to be able to examine bees at any time of year and ascertain whether stores are deficient. Even in a sharp frost the outer coverings may be removed and the bees inspected without disturbing them. I am glad to find that celluloid has found so many uses in connection with bee-keeping. For queen-cages, especially, it is well

adapted, and I have already referred elsewhere to its use for queen excluders.

With regard to the bee-proof thread, I have still some in use in my apiary, and am well satisfied with it; but I believe that some that was placed on the market was not satisfactory, and, as there is no advantage in point of price over iron wire and the fixing is more difficult, I fear its use will not become general. Aluminium wire has advantages over tinned iron wire, which soon rusts, and not only discolours the combs, but also the wax made from them. The additional price is not a serious matter in a small apiary, and aluminium gets cheaper from year to year.

While writing, may I be allowed to say that my supply of the seed of the Chapman honey plant is now exhausted; but in the autumn I hope to renew it, and shall be pleased to send some to any bee-keeper who encloses a stamped envelope with his request. Perhaps those who have tried it as a vegetable will send you their experiences.—WALTER F. REID, Fieldside, Addlestone, February 20.

ENEMIES OF BEES.

[5805.] *Bats.*—In the B.B.J. of February 9, page 60, a paragraph appears under the heading "Bees and Bats." On this question may I say: As it was getting dark one evening in the summer of 1903 I was standing by a hive that I had manipulated earlier in the evening, when I was attracted by a fluttering sound like that made by a small bird round myself and the hive. There was still a large cluster of bees outside the hive, and on watching carefully I distinctly saw a bat of medium size rush at the clustered bees, and I have no doubt pick one off, and after taking a short flight return and, as the doctor says, "repeat the dose." This continued until, being quite satisfied as to what was going on, I knocked the bat down with my hand, though it quickly recovered and got away. But I believe the lesson taught it wisdom, for I did not again see the bat at the hives.

Hedgehogs.—Last summer I met with an enemy of bees here that, as such, was new to me—a pair of hedgehogs and their piggies giving both myself and the bees a lot of trouble by climbing up to the hive-entrances after dark. This necessitated my visiting the apiary at hours of the night when "pig-sticking could be done." One night at 11.30 I found father hedgehog having his supper at the entrance to one of the hives, not sitting on the ground, but up on the flight-board, right on the table. He made a rush for cover, but was overtaken.

Toads.—These are among the greatest enemies of bees here, and once they acquire the habit of eating bees it is impossible to cure them of it. The toad, too, is most troublesome at supper-time. They can only be got rid of by taking them a mile away from the apiary; if carried only a few hundreds of yards they are back again on the following day.

Tits.—By far the greatest enemy of bees is, according to my experience, the small blue-tit. All the winter long does he tap at the hive-entrances and disturb and consume the bees. The larger tit is troublesome, but only in a lesser degree.

Next to the tit in mischief-working I find is the large spider, nearly black in colour, and the size of a pennypiece. This bee-enemy is most often found under hives where there is not much daylight, and the cause of their plump and sleek appearance is usually shown by a heap of the dismembered bees caught and carried from the front of the hive, mostly at night. Hundreds of bees may sometimes be found by the remains to have been killed by a single pair of these large spiders. They appear to eat only the juicy parts of the bee, leaving all the rest of the body untouched.

The common house-sparrow is troublesome in some years, not every season alike, and usually causes most annoyance in summer, when the bees are least able to defend themselves. I once found a sparrow dead in front of one of my hives with bee-stings in it.

Then we have the mouse, both the field and the common mouse being partial to honey, and to the warmth that may be found on the top of a stock of bees to which access is possible in winter. I have found a mouse stung to death, too. I have also known rats eat away the sides of straw hives to get at the honey. I am not forgetting that perennial cause of worry to bee-keepers—the wasp.

Several pairs of the red-backed shrike have nested in this neighbourhood every year, but though classed with enemies of bees, I have not been troubled with them. I found some fine fat lizards under two hives that were standing directly on the ground last autumn. Some fifteen years ago, when I was living in the southern part of this county, I got rather a fright one day on lifting off the cover of a skep, a large specimen of the common English snake lying coiled round on the hive, and his wrigglesomeness bolted into the bank near by before I could put down the cover.—WM. LOVEDAY, Hatfield Heath, Harlow.

SCOTCH HONEY (?).

[5806.] I was surprised indeed on reading page 51 of B.B.J. to see that *Scotch* honey was being offered at 4d. per lb., and can only say, if such is really the case, I may consider myself very fortunate. My eight hives produced 601 1-lb. sections, 531 of which were sold and realised

£20 18s. 9d., which runs to very nearly 9½d. per section; and the cheapest I have heard of in this district was a small lot of sixty sections sold at 7d. each. The cheapest extracted honey I have heard of was cleared at 6d. per lb. Californian honey is being retailed here meantime in glass jars at 8d. per 1-lb. jar. You already have report from our friend "D. M. M.," who is located in upper Banffshire, and my district (Grange) is situated in lower Banffshire, and may, therefore, be pretty certain that the honey offered by this London firm at 4d. per lb. was not gathered in this county.—W. Moir, February 17.

BEES AND HAZEL CATKINS.

[5807.] I should like to correct a mistake I made in my letter last year (5446, page 78). I said: "The catkins of the hazel were ripe when the leaf began to grow," which I find is altogether wrong. The catkins in the orchard where I keep my bees are already ripe now and nearly over, only a few of them remaining with any pollen. I am enclosing a bunch of catkins, and you will see that the anther cells have all burst, and the pollen scattered and gone. I dare say in Yorkshire they will be a week or two later than here. Referring to the letter signed "Practical Experience" (5794, page 56), I have never in my life seen a catkin turn black from frost before the pollen has been scattered, but afterwards the colour does become dark, even without frost. During the latter part of October, 1904, I began to watch carefully the catkins and nut blossoms, and I have observed them closely every month since. One isolated nut tree I selected, and have carefully picked off every catkin I could find growing on it, so that if fertilisation has not already taken place, it never will. I shall wait until the nuts grow, and then see whether they have kernels or not.—J. Skinner, Bristol, February 13.

[Referring to our correspondent's request that we should inform "J. R., St. Albans," and "A Lover of Bees" of his wish to correspond with them privately on the subject of "Bees and Hazel Catkins," and publish results of their respective conclusions, it will be better for Mr. Skinner to write to both gentlemen himself, and we will forward letters so sent to the respective parties, but can take no personal share in the discussion.—Eds.]

EXPERTS AND FOUL BROOD.

(*Concluded from page* 65.)

[5808.] Too much reliance should not be placed on the action of disinfectants. I know of no disinfectant which is capable of destroying the *spores* of foul brod in the two or three minutes usually occupied in washing the hands, even if used in much stronger solution than would be pleasant or even possible without damaging the skin considerably. One is too apt to rely on carbolic acid or perchloride of mercury and to neglect the far more important item of thorough scrubbing. In a word, the process should be mechanical rather than chemical and bactericidal. The bacilli and spores should be *removed* from the hands by the nail brush rather than killed by the disinfectant employed.

Far be it from me to depreciate the value of disinfectants; as adjuncts to the mechanical process they are excellent; they will kill, or at any rate inhibit, the growth of the bacilli, but will have little or no effect on the spores. Without the washing and scrubbing disinfectants are far less powerful, as they are unable to penetrate dirt, etc., quickly enough to be effective.

Hot water is preferable where it can be obtained, and the soap used is immaterial, though I prefer soft soap myself. I have but little faith in carbolic soap or other soaps impregnated with small quantities of antiseptics.

Before washing, propolis should be removed with methylated spirit.

The next question for consideration is the choice of a disinfectant. The chief essentials are:—

1. Effectiveness.
2. Cheapness.
3. Convenience, i.e., portability and ready solubility.
4. Comparative non-toxicity, i.e., it must not be too poisonous.

The antiseptics in most common use are (1) carbolic acid and (2) perchloride of mercury. The relative value of these I will briefly discuss, together with a third, viz., "lysol," which I should like to bring more prominently before the notice of bee-keepers.

Carbolic Acid.—To be effective in the time at our disposal it should be used in 5 per cent. solution (1 in 20). About a quart of the solution would be required each time the hands are washed, and this would need four tablespoonfuls of the acid, costing, roughly, about two-thirds of a penny if the commercial acid be used, and probably more if Calvert's be used. The *raw* acid is a far stronger agent than the purified, but is not so pleasant to work with. The price varies, but would, I think, be procurable at about 4s. the gallon. The chief disadvantages of carbolic acid are found under the heading of lysol and beta-lysol. Carbolic acid may also be obtained in tabloid form, but the price is prohibitive for general use.

Perchloride of Mercury.—This is a very powerful antiseptic, which is most conveniently carried in tabloid form, the best

size being that which, when added to one quart of water, makes a solution of 1 in 1,000. The cost would be about ½d. each (wholesale). There are, I think, several objections to the use of perchloride of mercury:—

1. All soap should be removed from the hands before immersing them in the solution, otherwise a portion at least of the antiseptic will be neutralised. This really necessitates the use of three receptacles, one for washing, another for rinsing the soap off, and a third for the perchloride solution. This in itself is a serious objection.

2. The solution precipitates albumen, thus limiting its power of penetration. A coating of albuminate of mercury is formed, more particularly on the outside of spores, and this protects them from the action of the antiseptic. This property is to some extent prevented by the addition of an acid, e.g., hydrochloric acid, to the solution.

3. The solution is very poisonous, and the tabloids are apt to be mistaken by children for sweets. I have known one or two such cases.

4. When much used the hands become very rough and unpleasantly dry.

5. The tabloids readily absorb moisture if the bottle is often opened, and they will then become soft and run together in a mass.

Lysol.—This is a brown oily liquid with a phenolic odour, belonging to the coal tar series. It owes its bactericidal activity to the fact that it contains 50 per cent. of free cresols dissolved in neutral potassium soaps. It is miscible in water in any proportion, and forms a solution which is soapy to the touch. This soapiness is an advantage, as you are more or less independent of soap, although I prefer to use a little extra.

A tablespoonful added to one quart of water makes a solution of rather more than 1 per cent. This is considerably more powerful than a 3 per cent. solution of carbolic acid, and costs when litre (1¾ pints) bottles are used about ½d., and rather less when bought by the gallon. It is put up in various sized bottles and in 1 gallon drums, and each bottle is provided with a measure. One litre contains 71 tablespoonfuls and costs 3s., whilst 1 gallon contains 320 tablespoonfuls and costs 13s.

Recently a new preparation, *beta-lysol*, possessing the same properties as lysol, and costing only half as much, has been introduced into veterinary practice. I have not yet had an opportunity of testing it, but it appears to me to be almost identical with lysol, and would, no doubt, be suitable for bee-work. Two gallons of beta-lysol, costing 13s., should be sufficient for the spring and autumn work of an expert with a visiting list of perhaps 250 members.

The chief advantages of lysol and beta-lysol over the other antiseptics named are:—

1. More effective than carbolic in solutions of equal strength.

2. Less poisonous—only one-eighth as poisonous as carbolic acid, far less so than perchloride of mercury.

3. More readily soluble than carbolic.

4. Contain soap.

5. Do not coagulate albumen, but have, on the contrary, a solvent action and greater power of penetration than perchloride.

6. Can be used in more dilute solution than carbolic, therefore less need be carried—an important advantage for the travelling expert.

7. Do not injuriously affect the skin, but rather tend to soften it.

8. Cheaper.

For the disinfection of infected hives, etc., after a thorough scrubbing with soft soap and water containing 5 per cent. sol. lysol (two tablespoonfuls to the *pint*), I would recommend that all joints and crevices of the inside of hive be painted with pure lysol and the hive afterwards exposed to the air for some hours.

Having disposed of the question of antiseptics, there remain a few minor but not unimportant details to be considered.

The idea of wearing apron and sleevelets to protect the clothing from foul brood germs is, though sound in principle, impracticable for the travelling expert. Every examination of a suspicious stock would necessitate a change of these articles; consequently, owing to the difficulty of sterilisation, so many would have to be carried that the expert would be greatly hampered on tour.

If possible, the sleeves should be rolled up after removing the coat, and great care should be taken to prevent combs, etc., touching the clothing. How often is a foul-broody hand thrust into coat or trouser pocket in search of knife or matches!

Such thoughtlessness may lead to serious mischief, as it is next to impossible to effectually disinfect articles of clothing except by steam under pressure.

I shall not discuss here the relative merits of smoker and carbolic cloth as agents for subjecting bees, but shall merely touch on their suitability for use by the travelling expert, bearing in mind his almost constant contact with foul brood.

To the expert on tour, who is frequently cycling or walking, a smoker must be rather a clumsy appliance to carry; it is, moreover, bound to become infected with foul brood germs at times, unless the

greatest care be taken, and it will then be a most difficult thing to disinfect.

I think, then, that the carbolic cloth is preferable—not that its use will be likely to have a beneficial effect on the disease; on the contrary, it becomes, if improperly used, a more dangerous weapon than the smoker, as it comes in closer contact with combs and bees, but simply because it possesses the great advantage that it can at once be burnt after use on an infected stock. It is better, in my opinion, to always destroy an infected cloth, and not even keep it for use on other diseased stocks, for reasons which I have given earlier on, though this method will entail a slight additional cost.

The other alternative is to carry neither smoker nor cloth, but to rely on finding one or other in the apiary visited. This is hardly advisable.

Where a smoker is used, it is better, if possible, to let a second person attend to the smoker and nothing else; the expert need not then handle it at all, and it will thus escape all risk of infection.

The expert should have with him the following articles:—

1. Small tin of soft soap.
2. Nail brush.
3. Small bottle (about 2 oz.) of methylated spirit.
4. 6 or 8 oz. bottle of beta-lysol (bottle marked in tablespoonfuls).
5. Small bottle of carbolic for carbolising cloths.
6. Supply of cloths. If preferred, these may be already carbolised. Not too many should be carried, as the material can always be obtained without much trouble.

Summary of procedure.

1. Remove coat and roll up sleeves to elbow before commencing manipulations.
2. Wash hands and forearms before commencing and after finishing manipulations, and after examining an infected stock.
3. Remove propolis, before washing, with methylated spirit.
4. Use soft soap and water (hot if possible) with 1 per cent. beta-lysol, and scrub for two minutes with nail brush, paying particular attention to the nails, which should be kept short.
5. Always examine strong stocks first; such are less likely to be affected with foul brood. Reserve diseased colonies till last (if known).
6. Avoid unnecessary manipulation of diseased stocks.
7. Use carbolised cloth, burning same if used for infected stock.
8. Never put hands in pockets whilst manipulating. Do not let combs, etc., touch the clothing, and avoid dropping bits of foul-broody comb about the apiary, as in cutting out queen cells or brace combs, etc.

All these precautions are, I think, practicable, and can be carried out without unnecessary trouble.

It may seem to many that I am attempting to hamper experts with a number of details, but I am convinced that it is only by careful attention to details that success can be looked for in this, as in all other branches of bee-work, and indeed it is more important in this than in other branches, as one little slip in technique is liable to nullify all one's efforts.

Outbreaks of foul brood occurring within a few weeks of an expert's visit are only too liable to be attributed to that visit, even as a mother lays to the charge of vaccination any illness (be it measles, whooping cough, or a broken leg) occurring in her child within about two years of that operation. Hence it behoves experts not only to adopt such precautions for limiting the spread of foul brood as they are able to devise, but also to let the bee-keepers they visit *see* that they are taking those precautions.

I am afraid I shall be looked on as an alarmist pointing out possible methods of spreading foul brood, but probably the methods mentioned are only responsible for a small proportion of cases, and in any case it is better to bear these things in mind, as we can then be on our guard against them.

We cannot hope to utterly exterminate foul brood for a great many years, if ever; but by care and diligence we may limit somewhat its ravages and keep it sufficiently in check to prevent it being the menace to bee-keepers it has hitherto been and appears to be now in some counties.

The presence of a few diseased cells in a hive does not militate against the harvesting of a good crop of honey, but is a potential source of evil which should not be overlooked, and which justifies the taking of such measures as will ensure the destruction of the bacilli before the sporing stage is reached.—T. S. Elliot.

Echoes from the Hives.

Lorton, Cockermouth, Cumberland, February 14.—St. Valentine's Day, and the bees here seem to have made a good start for the season of 1905. Although very little sunshine, it was a mild day for February, bees flying strong and carrying home a quantity of pollen. No pollen was carried into the hives here last year before March. My stocks are all in excellent condition, and seem to have wintered well so far. They are Italians and hybrids, and each stock is headed by a queen reared and

fertilised last August. Breeding is in full swing, and some have young bees hatching out.—G. W. A.

Queries and Replies.

[3669.] *Cleaning Hives: Limiting Swarming.*—1. Is it necessary to clean each hive the bees are in now when spring comes, or is it only needed in the case of an empty hive which has been put away? 2. Will you advise me as to the best course to pursue this spring with regard to swarms? I have eight hives now, and do not want more than twelve. I suppose the only course will be to return the surplus swarm minus its queen. I could cut out *all* queen-cells, I suppose, and stop a swarm coming off?—M., Hexham, February 2.

Reply.—1. All good bee-keepers go through their stocks every spring in order to put them in thorough working trim for the current season. But even the careless should clean away all débris from floor-boards and propolis from top-bars after winter is over. 2. If only a moderate increase is desired, it should not be difficult to limit the swarms to four from eight hives without any returning of swarms as proposed. Give timely room in advance of requirements in order to stop swarming, and should two of your eight colonies swarm in spite of precautions taken, make four new stocks to complete the desired dozen of first and second swarms from two hives should such come off.

[3670.] *Transferring Stocks from Boxes to Frame-hives.*—Seeing the kind advice given to inquirers like myself in your valuable paper, I will be glad of a reply to the following questions through its columns:—Last spring I received a ten-frame hive of bees, about the management of which I knew absolutely nothing. In the following June a swarm came off, which I secured and placed in a box. Later on a cast issued, which I returned to the parent hive, but the bees swarmed again in a few days, when I also put them in a box. None of these boxes hold the standard frame, and so I now wish to transfer both stocks from these boxes to properly-made hives taking the standard frame. I wanted to do the transferring this spring, and therein my difficulty arises. I therefore ask: 1. If I put them in on full sheets of foundation, will they draw it out? As I shall be sending them to the heather, about thirty miles away, I do not wish "sugar-built" combs. 2. The parent hive and the cast are weak, so would it be better if I joined them and gave the queen from the cast to the swarm, as its queen is three years of age? For the future management of my bees I am sending for Mr. Cowan's "Guide Book," for which I enclose P.O. for 2s. 9d. I send name, and sign—"Duffer," Lanarkshire, February 13.

Reply.—1. Your best course will be to let the bees transfer themselves from the boxes to frame-hives; and as you will now have the "Guide Book," reference to page 140 will show how the "transferring" can be done. We do not quite know what is meant by "sugar-built" combs." 2. When you describe the parent hive and the "cast"—or second swarm—as weak, we infer that the first swarm is strong, and, this being so, it will not be wise to destroy the queen of last-named stock and replace her with, possibly, a less prolific queen. It so often happens that colonies of bees re-queen themselves by deposing the mother-bee and raising a young queen unknown to their owner, that it is not safe for a novice to conclude that the queens are worn out, when they may be quite young. With this in view, therefore, we should not advise uniting as proposed.

[3671.] *Suspected Robbing by Bees.*—I should be greatly obliged if you can answer me in this week's B.B.J. the following question: I have four stocks of bees in my garden, and they all have plenty of stores, and while they seem fairly strong in bees, the bees in No. 3 hive continually go in and out of No. 1, and both lots seem on very friendly terms. Do you think they are "robbing"? Or what do you think is the cause? My brother, who lives near, has eleven hives, and three of his stocks are doing the same thing, with plenty of stores. He has dusted some flour on the bees as they come out of one hive, and has watched them entering two different hives, yet there seems to be no fighting! We can find nothing in the "Guide Book" that has any reference to similar action by bees, and we have never known anything like it before. An old saying of my parents was that "bees never rob one another at home; they always go away for their 'robbing.'"—Ed. Light, Bournemouth, February 20.

Reply.—The probability is that one of the free-visiting stocks is queenless, and the stores of the latter are being carried off by the fraternising bees of the other stocks. If our surmise is correct we should expect to see the queenless bees sooner or later deserting their hive and joining forces with the supposed "robbers." But you may arrive at a different conclusion by examining the hives, which we should certainly do if they were ours.

[3672.] *Fermenting Honey as Bee-food.*—Having a large quantity of honey that has fermented, I would like to know: 1. Whether after boiling a minute or two I could safely feed the bees with it; if not, what use I could put it to? 2. Also, why

does honey ferment that has been stored in a temperate atmosphere? With many thanks in anticipation of reply, I send name, etc., and sign—APIS MELLIFICA, Leighton Buzzard, February 15.

REPLY.—1. No harm will follow its use as stated if the honey is "thinned down" with hot water to the consistency of good syrup, and then boiled for a minute or so. 2. Honey does not ferment if properly ripe when stored and kept in a suitable place—i.e., one that is cool and dry.

CAMBS. AND ISLE OF ELY B.K.A.

A general meeting (called by special request) was held on Saturday, February 4 (Mr. C. J. Mapey presiding), to consider what action the Association should take in connection with the proposed Foul Brood Bill. After a lengthy discussion, in which the Chairman, Messrs. F. R. Ford, R. Brown, C. Bocock, J. Short, J. Casbolt, and others took part, it was proposed and seconded "That the Cambs. and Isle of Ely Bee-keepers' Association is opposed to the Foul Brood Bill." To this resolution the following amendment was proposed and seconded: "That, while not agreeing with the Bill as drafted, the Association considers that some sort of legislation is very necessary." On being put to the meeting the amendment secured only three votes against twelve for the original motion, which latter was therefore carried. The discussion showed that the chief objection to the Bill as drafted was that the proposed Act would destroy all personal liberty in the owner's management of his apiary, and place same entirely in the hands of Government officials. A number of letters were read from members unable to be present giving their views for and against the Bill.—G. E. ROGERS, Hon. Sec.

PRESS CUTTING.

SOME FACTS ABOUT HONEY.

Honey is the only sweet that may be eaten in any quantities and for a long time without interfering with the action of any of the vital organs. Its food value is twice that of pork, pound for pound, and it has been noticed that persistent honey eaters are not nearly so liable to diseases of the respiratory organs as those who do not use it at all. It is calculated that the entire honey product of sixty bees during their entire working life will not amount to more than one pound of honey, an amount that a man with a good appetite would eat in a day without thinking much about it.—*Liverpool Post and Mercury.*

Notices to Correspondents & Inquirers.

*** "Baby Nuclei," by "Swarthmore."—W. Talbot-Bretherton, Rev. J. R. Ward, F. V. Hadlow, and others.—We had no intention of stocking the above-named book reviewed on page 61; but, as many applications have been made for it, and it is troublesome to procure it direct, we have decided to get a small supply from the author at once, and expect to have them in about a fortnight.

ST. HELIER (Jersey). — A Learner's Queries.—1. How Foundation should Hang in Frames.—Dealers who know their business cut the sheets properly with regard to cell-walls. The fault, therefore, is the dealer's. 2. Sheets of foundation, when "buckled" or twisted, may be straightened by warming at the fire or in warm water, and then laying on a flat board to cool. 3. Returning Swarms.—If returned to parent hive within twenty-four hours no fighting will follow; but in cases of not knowing which hive the swarm is from, the risk of fighting is great, even if dusted with flour when joined up. 4. If granules of candy are cast out of hives it simply shows badly-made candy. 5. Cutting Winter-passages in Combs.—Holes about the size of a shilling will do. Sticks across frames are simple, and better than such "cleats" as you suggest. 6. There is no "sure preventive" against stings.

W. LLOYD (Lancaster).—Co-operators and Bee Shows.—It is to be feared that appeals such as your own last year would only have similarly disappointing results, seeing that co-operative societies have no funds at disposal for prizes at honey shows. The same may be said of your well-meant efforts to enlist help from the Educational Committees of County Councils, whose funds are only available for technical education in one form or another. It is within our knowledge that the Lancashire C.C. have already made grants in aid of technical instruction in bee-keeping; but they could not possibly devote the public funds to prize-giving at shows.

J. H. CHAWNER (Leicester).—Sugar for Bee-food.—If the firm is "reliable," as stated, you should accept their guarantee with regard to its being cane sugar. We could not guarantee sample with certainty without analysis, and this is of course out of the question. But, apart from its being either cane or beet, it is a moist, unrefined sugar, and as such is unsuitable for bee-food.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

CHEAP SCOTCH (?) HONEY.

We have received several letters from readers on the subject of low-priced honey mentioned in our pages as offered for sale as "Finest Scotch," in our issue of February 16. But no useful purpose would be served by publishing the views of, no doubt, well-meaning bee-keepers who feel justly aggrieved at seeing statements in print which are flatly contradicted by their own practical experience of the past honey-season in Scotland.

Our reasons for non-publication of strongly-worded opinions are, first, they go beyond what can be safely said without being libellous; and, second, our good friends do not realise the difficulty in arriving at a safe conclusion with regard to the country in which honey is gathered They should bear in mind that whether, say, white clover is grown in Scotland or in China, the honey will be the same to any ordinary person who examines or tests it. The only possible chance of locating the difference between the two would be a microscopical examination of the pollen grains, always found in honey, by a skilled botanist, to see if these came from a species of plant that grows in China, and not in Scotland (or vice versâ). But who would go to this trouble? Nor would the chemist help us much, for analysis only proves the constituents of honey, and throws no light on where it is gathered. In fact, the matter in dispute can only be settled practically in one way, i.e., by the sellers giving the name and address of one or more of the bee-keepers in whose apiary the honey was gathered. This is a simple way of arriving at a decision as to the accuracy or otherwise of the description given in the B.B.J. of February 16. Until that has been done the matter may well be allowed to drop.

BEE-KEEPING STATISTICS.

REPORT OF THE D.T.I. FOR IRELAND, 1903.

From the annual report of the Department of Technical Instruction and Agriculture for Ireland, recently issued, we publish below the section headed "Bee-keeping." The statistics given are very interesting, and it is a pity we cannot have similar returns furnished for this country as in Ireland, where the necessary details are collected from bee-keepers by the constabulary.—[EDS.]

BEE-KEEPING.

The inquiries made in the preceding seventeen years relative to the extent to which bee-keeping is followed in Ireland, and the degree of success attained in this special branch of rural economy, were repeated this year with reference to the season of 1903, and the results will be set forth in Table VII. In 1890, at the request of the Irish Bee-keepers' Association, the form previously used for collecting information on the subject was varied in some respects, and additional details were obtained. According to the returns received, the quantity of honey produced in 1903 was 20.4 per cent. below the average quantity for the preceding ten years. It was also 31.4 per cent. below the average quantity for the year 1902, the returns for which showed a decrease of 27 per cent., as compared with the quantity in 1901. The quantity of honey produced, according to the returns, was 359,624 lb.; of this 95,602 lb. were produced in the province of Leinster, 118,199 lb. in Munster, 95,696 lb. in Ulster, and 50,127 lb. in Connaught. Of the 359,624 lb., 252,955 lb. were produced "in hives having movable combs" and 106,699 lb. "in other hives." It was stated that 139,199 lb. was "run honey," and 220,425 lb. "section honey." The number of stocks brought through the winter of 1903-1904 amounted to 26,474, of which 15,041 were in hives having movable combs and 11,433 in other hives. According to the returns collected there were 3,850 lb. of wax manufactured in 1903, of which 2,688 lb. were from hives having movable combs and 1,162 lb. from other hives. The returns received in 1903 gave the quantity of honey produced in 1902 as 524,166 lb.; the number of stocks brought through the winter of 1902-1903 as 32,770, and the quantity of wax manufactured in 1902 as 5,890 lb. The quantity of honey produced in 1903 was less than that for any of the years following 1896; it is 31.4 per cent. less than the quantity returned for 1902, and shows a decrease of 20.4 per cent. as compared with the average for the ten years 1893-1902.

NOTTINGHAMSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the above association was held in the People's Hall, Heathcote Street, on February 18. Mr. W. S. Ellis presided, and there was a large attendance of members.

In the annual report it was stated that the County Council had renewed their grant of £40 for technical instruction in bee-keeping and demonstration lectures had been given at the following centres: Newark, Ruddington, Welbeck, East Bridgford, Kingston, Sutton Bonington, and Moorgreen. During the year 188 apiaries had been visited by the experts. These apiaries consisted of 694 stocks of

bees, 561 of which were examined. Only 34 of these were found to be diseased. Two candidates offered themselves for examination for expert certificates during the year, viz., Mr. J. Gray for second class and Mr. W. H. Stoppard for third class, and both gained their certificates.

Viscount St. Vincent was thanked for his past services, and unanimously re-elected; as was also Mr. P. Scattergood, auditor, and Mr. Geo. Hayes, secretary. Mr. Pugh and the secretary were appointed to represent the association at the meetings of the B.B.K.A. The following were elected to form the committee:—Messrs. T. N. Harrison, S. W. Marriott, G. E. Skelhorn, W. H. Windle, A. G. Pugh, G. E. Puttergill, T. Randall, G. Smithurst, J. C. Wadsworth, F. G. Vessey, and H. W. Dickman.

On terminating the more formal business of the meeting the members and their friends partook of tea, after which a musical programme contributed to the evening's enjoyment. There was also an exhibition of bee-appliances, with prize competitions for extracted honey, the exhibits being afterwards presented to the Children's Hospital. The proceedings were varied by a discussion on the Bee-Pest Bill, and concluded with the annual prize-drawing and presentation of prizes.—Geo. Hayes, Secretary, Beeston.

NORTH-WEST DURHAM B.K.A.

The annual meeting took place on February 18 in the Co-operative Buildings, Consett, under the presidency of Mr. A. Armstrong. There was a good attendance of members. The report stated that at the last annual meeting it was decided to become affiliated with the Northumberland and Durham Bee-keepers' Association, and they were now entitled to participate in the insurance scheme of the B.B.K.A. The annual excursion was to Mr. Thomas Rochester's apiary at Benfieldside. The society had two classes at the Northumberland and Durham Association Honey Show at Newcastle, and also two classes at the Chrysanthemum Show at Leadgate, and gave prizes for two other classes. Through the instrumentality of the County Council, the association had the services of Mr. J. Waddell, who was glad to report that he found foul brood on the decrease in many hives belonging to members. The financial statement showed a balance of £5 11s. in hand. The undermentioned officers were elected: President, Mr. S. K. Annandale; vice-president, Mr. J. N. Kidd; honorary treasurer, Mr. Charles Thompson; secretary, Mr. E. J. Walton; committee, Messrs. A. Smith, A. Armstrong, W. Eggleston, J. Rochester, N. Garbutt, W. Davison, and J. Cuthbertson. The secretary (Mr. Walton) read a paper on "Work in Exhibition Sections."—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

DRONES.

[5809.] Drones have ever been a bit of a mystery, and their existence in such numbers has puzzled many wise heads in all times. In a community where all the teeming thousands are distinguished above all other insects for their industry, why should a class of idlers exist, gorging themselves on the choicest sweets, and spending their time in luxury? Why, when all others are producers, should so many be simply consumers? Why, when they have once been called into existence, should the workers so ruthlessly evict them? How is it that the greater bee is subject to the smaller? And if males, why should they be under subjection to females, thus reversing an almost universal rule of Nature?

Were they simply nurses? Or was heat production their one duty? Did they chemically deal with the honey and manufacture it? Were they really males? If so, did they visit the cells containing eggs and coat them with their spermy juice? How were they themselves generated? Had they their origin in animable matter brought home from the flowers? Were they bred from drones only, or were they a product of the worker? Were they simply bees who had lost their stings? Were they "Captains" acting under the orders of the Master Bee? How, if they were really males, could they be subject to the females? If males, how had workers stings, and not they, as Nature never gives females to defend themselves and destroy the nobler males? Again, supposing them to be the only males, why were they produced in such prodigal numbers? Why should 500, or even 1,000, exist in a hive when perhaps one might be sufficient? Were they a kind of eunuchs acting as servants or nurses, or simply a redundancy of Nature? Did not even swarming in some mysterious way depend upon these inexplicable fel-

lows, and was it a rule, "No drones, no swarms"? Why should they appear only after the main hatching of bees had taken place? Why should a queenless stock retain them, and why should a hive retaining them generally die out? Did they do work of any kind? Why had they no pollen baskets, no true tongue, and no sting? Were they really of any use to this model governed community? Was it wise to aid the bees in ridding their hives of these inexplicables?

These and many more questions, all pertinent to the point at issue, were asked over and over again until about a century ago, and no true solution of the mystery was ever given. Ancient and semi-modern authors strangely deluded the world with "whimsies," beginning with the "silver-tongued" Virgil, who asserted that they bring the seed of their young from the flowers; and ending with the learned Dr. Huish, who believed that every egg was visited and dealt with by the drones. Between these two writers we find almost every species of view prevailing; but all through there went on the controversy: Whether the drones were males or females! Strange to say, some of our earliest English writers came as near to an approach to the truth as any who wrote for the next two hundred years. Butler's work, for instance, was entirely founded on a *Feminine* Monarchy, and he speaks of "Drones, by whose masculine virtue they strangely connect and breed for the preservation of their sweet kind. There is a necessary use for him, and he cannot be spared, as without him the bee cannot exist, so when there is no use for the drone then there will be no room for him, as the wise little workers love his room better than his company." Warder, about 150 years after, declares that "Nature hath designed him, not for work, but for procreation," yet he proceeds to assert that "his great life-work is sitting upon and hatching the eggs, and keeping brood warm after it is hatched." We find this opinion crop up eternally. They are said to sit on the cells "as a hen doth sit on her eggs" in order to hatch them. Then, at mid-day, they get leave to recreate themselves abroad, their heat being no more required as nurses! Rusden, about the same time, goes back to the old theory that bees are bred from "animable matter" brought in by the bees when on their foraging flights, into which the king doth cast his sperm.

In general, most writers agree in one particular: That the mystery of the drone is "unaccountable and unintelligible." The first writer who gives the true solution is Thomas Moufet, an English physician, who wrote about 1634 a work in Latin, "Theatrum Insectorum," wherein he propounded the theory that bees breed by copulation, and that the male and female meet in some retired place. Most subsequent writers, however, for about 200 years after, agree with De Mountfort that this is simply a "bold conjecture," while some of them pour on it "the lash of their ridicule"; and it was only about a century ago that the researches of Huber and other succeeding investigators convinced even the most sceptical that the one and only reason for the drones' existence was to fertilise the queen, and, that single duty performed, the far-seeing little workers at once expelled them as encumbrances. Their number, too, is easily explained by the fact that the queen has to go abroad on her marital flight, and that only after a prolonged journey in the air does the strongest and fittest of her suitors overtake her: Nature thus secures by an almost invariable law that survival of the fittest to perpetuate the race. To few has it been given to actually witness the meeting; but most of us who have been much among the bees have, time and again, seen the young queen return from her nuptial trip bearing the unmistakable evidence that it has taken place during the few minutes she has been absent. Further confirmation has been obtained in less than a week by the presence of newly-laid eggs in worker-cells. On at least two distinct occasions I have had what I may consider ocular demonstration that, as a consequence of the act, the selected drone has offered up his existence on the altar of duty.—D. M. M., Banff.

THE "CLAUSTRAL" DETENTION SYSTEM.

[5810.] In bee-keeping, as in other matters, it would seem to be equally true that there is "no new thing under the sun." The "Claustral" method described in the BEE JOURNAL, February 23, I find is practically identical in principle to a plan I have made use of, except that in my case it is carried out without any structural alterations to the hive, and may be adopted by any one (without infringing any patent rights) who uses hives in which the frames hang parallel to the hive-front, and which are capable of holding thirteen or more standard frames. The plan is as follows:—Push the frames back 3 in. or 4 in. from the front of the hive, and hang in front of the frames a dummy board which reaches to about ½ in. from the floor, thus giving room for the bees to pass beneath. Cover the top of the space between this dummy and the hive-front with a piece of fine perforated zinc. This space constitutes the "detention chamber." Remove the door-slides and replace them by a strip of similar perforated zinc. To completely

darken the chamber I place in front of the entrance (which in my hives extends the full width of the hive), and about $\frac{3}{4}$ in. away from it, a long strip of wood about $1\frac{1}{2}$ in. high, which has been blackened on the side facing the entrance. This effectually screens the entrance from light, provided the porch roof is fairly deep, and not too high up. The *exact* position of this screen must be determined by the depth and position of the porch roof. It may be secured in its place by twisting a piece of wire round a nail driven into the ends, and another projecting from the edge of the alighting-board. To prevent light entering by the ventilators or bee-escapes in the roof, I make a tube of brown paper 3 in. or 4 in. long, and a trifle larger in diameter than the hole in the roof. The tube is blackened inside, and fixed with a couple of tacks inside the roof over the hole.—G. S. Newth, London, S.W., February 27.

THE "SWARTHMORE" SYSTEM.

[5811.] Referring to the remarks of "D. M. M. Banff," in your issue of February 2 (page 44) with regard to the "Swarthmore" system, I have myself thought it strange that some good Samaritan has not found time to give his experience for the benefit of those who wanted some information respecting the right or wrong way of carrying out the details of "Swarthmore's" plan. I find it always very much easier to get wrong than right in all new undertakings, especially those connected with bee-keeping, and this leads one to think that if things do not work all right, many bee-keepers give up in disgust without asking themselves the question, "Can it be my fault?" For my own part, I am very much in love with the "Baby nuclei." Last winter—1904—I made all the apparatus required, including "cell-compressor," confining-box (ventilated) to hold four standard frames, queen-cell nursery frames, fourteen transferring-screens for mating-boxes, etc. I also made the same number of outside mating-boxes. Previous to this I bought for a guide and pattern one transferring-screen, twelve compressed queen-cells in cups, and one outside mating-box. The only difference I made was giving more protection against heat and cold to the mating-boxes, mine being double-walled, and packed with cork-dust. I do not bestow very much care in making these boxes, the material used being simply $\frac{1}{4}$-in. grocer's used boxes. I had an impression when making these they might not answer, but if they did I could easily make them with more care and use better wood. The small frames I made from $\frac{1}{8}$-in. wood $\frac{7}{8}$ in. wide, so that three just filled a shallow-frame. I gave these to a strong stock to work out and fill with honey and pollen. I found the work of grafting queen-cells a very delicate job, requiring great care and good eyesight. I am sorry to say mine is somewhat defective. But I met with success, although the season was very uncertain and variable as regards the honey-income, a good inflow being essential to success.

My first lot of mating-boxes were put out about twenty yards away from the hive from which the bees were taken. I found next morning the bees had left the boxes and gone back, I expect, to the old stock. I thus lost my first batch of queens through exposure to cold. On next attempt I waited for queens hatching, and then filled mating-boxes for them as required. When the bees had entered the boxes I dropped the queens in amongst the bees through hole in top of frames, and then took them about one mile away from my apiary. The result was every queen was fertilised, and they are all now doing duty with established stocks. There is one matter, however, I am not quite certain about in connection with the bees in the large ventilated box holding four frames. The question is: Should these be empty frames, or should they contain honey, along with the usual frame of compressed cell-cups?

I have this winter tried wintering queens on the small frames mentioned above, with about half a pint of bees to each queen. I had a look at them about the first week in this month to see how these small lots were progressing, and found the queens alive, and egg-laying to all appearance, but thought it best not to lift the combs out. I might mention these small lots have been exposed to all weathers in open ground.

I have this winter made a queen-nursery on a much larger scale, so that I can have a good supply of queens in early spring to replace worn-out ones. I find after getting my bees from the moors late in September it was nearly impossible to re-queen stock

(*Continued on page* 86.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

A peculiar interest attaches to monastic apiaries, for in such bees have not only found a home for many centuries in the past, but have filled a useful part in labouring to provide honey for the community, and the wax indispensable for the requirements of the Church. Regarding that at St. Monica's Priory, we have been favoured with the following "notes":—

"Some six or seven years ago, wishing to take up a hobby at once pleasant and profitable, another clerical student and the present writer bought a frame-hive from a neighbour, and set up as bee-keepers. The stock sent off a swarm and

a cast, and we were soon the proud possessors of three hives; but the original colony did not survive the winter, a fact partly due, no doubt, to its weakening, and partly to the destructive activity of a mischievous mouse.

"The following autumn saw us in possession of six colonies, built up by swarms from our own, stray swarms that we had been fortunate enough to catch in our garden, and one or two purchases. But we had gained something by experience now, and, moreover, were perfecting ourselves in theory by a diligent study of Mr. Cowan's admirable 'Guide Book.' We invested in thirty shillings' worth of deal, and although our knowledge of carpentry was as unprofessional as that of bee-keeping, we managed to turn out therewith six very fair hives of the 'Cowan' pattern, following very closely the directions given in the 'Guide Book.' All the hives in the accompanying illustration are home-made. As these are catalogued at from a guinea to thirty shillings each, it will be seen that a bee-keeper may effect considerable saving if he has anything of a knack for carpentry. We also used to make our frames in those days, but we have since learnt that it is more satisfactory and even more economical to buy these ready-made, at least in the flat.

"Having raised our stock to six hives, we now aimed rather at checking swarming and increasing the honey output. Hence we have added only one or two each year, and now, after occasional failures, uniting of stocks, etc., we possess eleven colonies, and are not anxious for more.

"On the whole, without any sensational 'takes' or record harvests, we have been uniformly successful. Happily, we have never been visited by foul brood. Our bees are fortunately situated, facing east, and sheltered by a shrubbery behind from the noonday sun, in a large garden by the river Stour, and close at hand are abundant meadows of white clover, and some fine lime trees. On the white clover and the lime we depend for our harvest. The greater part of the honey is very clear, of lemon colour, and excellent flavour.

"As regards monetary returns, we have little difficulty in disposing of three or four hundred pounds in the course of the year to friends and neighbours, at an average price of 10d. per section or 1 lb. jar. We have an assured sale for as much wax as we can produce at 1s. 6d. per lb. Our original idea was to embark on an agreeable hobby that would pay for itself and leave a margin. After supplying the "firm" liberally with all necessary and convenient machinery, the margin has proved considerably wider than antici-

APIARY OF ST. MONICA'S PRIORY, SPETTISBURY, BLANDFORD, DORSET.

pated, and it might very easily, with the expenditure of a little more time and energy, be further enlarged.

"It seems a great pity that so many cottagers, to whom such a profit would prove so welcome an addition to scanty incomes, have not sufficient initiative or 'go' to take up bee-keeping thoroughly and to carry it out on modern scientific lines.

"For—and this is the one item of advice I have to offer from my little experience—it is useless to try to keep bees in a slipshod fashion; whereas they more than amply repay that attention to details which is necessary, in fact, for success in any undertaking. Let a man of average intelligence carefully follow the instructions given in any reliable bee book (personally, I swear by Mr. Cowan's), and the profit and pleasure he will derive from his apiary are assured.

"This is, I think, not the first time that readers of the B.B.J. have been shown a 'monastic' Home of the Honey Bee, for ours certainly is not the only one that exists in England to-day; and in the past, when beeswax was in such requisition for Church purposes, the bee community was an important item of almost every conventual establishment. Many, also, was the 'moral' which the monkish writers of old drew from their observation of the busy bee."

("*The Swarthmore System*" *continued from page* 84)

on account of time and the "warm" reception one gets from the bees at this time. They accept queens better in the spring, and it is then much easier to find queens amongst the reduced clusters.

I am inclined in future to work on this system, for you very rarely get favourable results with aged queens. Hoping to see a few remarks from other bee-keepers interested in the "Swarthmore" system, more especially from our friend, "D. M. M., Banff."—J. H. Horn.

SWARM-PREVENTION.

[5812.] It has been very mild and sunny here for the last few days, and bees have been very busy in the aconites. There is nothing I like to see better than the bees crowding in with their first loads of yellow pollen for the year. I find several of my queens have started laying, so that our busy bee-time will soon commence. I want to prevent swarming this spring-time, but am afraid it is impossible. Some say that if plenty of supers are put on the hives, the bees will fill them with honey, and not swarm, but I cannot agree with those who make these assertions. It may help to lessen swarming, but it does not prevent it, at least in my own apiary, for when there is a good honey-flow, and the weather is hot, the bees will swarm. I went in for increase of stocks last year, so I let my hives swarm. I had a new "W.B.C." hive that I wanted to stock with my first swarm, but at the latter end of May I had two swarms come off together, and united of themselves, so I put the whole of them in the "W.B.C." hive. Then about the middle of June I put on a box of shallow-frames, and also a rack of sections, thinking I should get some honey, but a few weeks later, on a very warm day, the bees swarmed. I looked in the supers, but found nothing done in them beyond a little built-out foundation. I might add that the bees had their entrance open full width, so it was not through lack of ventilation that they swarmed. In August I examined the body-box of hive and found it full of beautiful honey, with very few bees and no queen, so I drove the bees from three skeps and united with the few bees that were left in the hive, and a fortnight later I was delighted to see a beautiful patch of brood. I think that as it is natural for the bees to swarm when the weather is warm, and plenty of honey about, it seems useless to try to prevent it.—W. A., Rippingham.

BEE NOTES FROM YORKSHIRE.

TAKING BEES TO HEATHER.

[5813.] I bought a lot of driven bees in September for 3s. 6d., hived them on four sheets of brood foundation and three frames of built-out combs, well filled with heather honey, then packed them down for winter in October, giving them about 2 lb. of candy. I had a look at them in January, and found stores nearly all gone. I started feeding them on honey the first week in February, and had another look at them on the 18th, and they appeared in fine condition, so I am hoping to build them up into a first-class colony by the time clover is ready for gathering from. I am trying this as an experiment just to see what can be done with driven bees and the exercise of a little care.

I would also like to say a few words about preparing bees for travelling, as I have made a little contrivance to help in safe packing for transit that I am thinking of registering. It consists of a pair of doors which can be made to fit any hive in half an hour, and by their means the entrance reduced to a single bee-space, while allowing a width of 8 in. by 1 in. for admission of air. My bees have had this all through the past winter, and the plan has worked well, because there is no fear of "robbing." I always winter my bees in Sheffield, and take them in April to a place sixteen miles away, where they remain till August, when I cart them six miles farther to the moors, so as to be close on the heather. When moving

the hives I only have to close the doors, put in two screws, and they are ready for moving in one minute. I have never lost a bee yet with my new mode of packing. I now wish every bee-keeper a prosperous season in 1905.—W. S., Sheffield.

BEES AND HAZEL CATKINS.

A BEE-NOTE FROM AUSTRIA.

[5814.] Seeing frequent notes in our beloved B.B.J. on the question, "Do Bees Work on Hazel Catkins?" (or, as they call them out here, Haselnusskätzchen!), may I give you the views of a far-off but constant reader? Being in the Plavia Apiary to-day, where there are forty-five hives of very busy bees, it would have done you good to see how they worked from bottom to top of those catkins, collecting dark-coloured pollen. These catkins are about 1½ in. long, and every year the bees start work on them most energetically. In a few days from date of writing the almond trees will begin to flower, and then our real season of work begins. The past winter has been very cold for this part of the world. I have lost one stock through starvation, much to my regret; indeed, I cannot avoid a feeling of remorse after allowing even one stock to die for want of food. But a journey thirteen kilomètres (eight and a half miles) on one's "bike," with the thermometer 4 deg. "Réaumur" below freezing-point, is not a very pleasant one; but I undertook it to see if the bees were still alive. I am hoping to give you, Messrs. Editors, a call in July next, as I shall be coming home to see you all in that month.—H. H. R. ("A Faithful Bee-man"), Plavia, Istria, Austria.

[We shall be very pleased to see you on arrival in England.—EDS.]

CELLULOID FOR BEE-KEEPERS.

[5815.] With reference to the above allow me to point out that although celluloid quilts have all the advantages claimed for them in Mr. Reid's letter, which appeared in your last issue (page 74), they are very dangerous to both the bees and the bee-keeper. Celluloid is most inflammable, and when ignited it is almost impossible to extinguish it, from which it follows that the bee-keeper, unless utterly reckless, must discard either his smoker or his celluloid quilts, and I do not think there is much doubt as to which appliance the average bee-keeper will attach most value. Any one interested can test the matter for himself at the cost of a few pence by purchasing a lady's celluloid comb or pin at a hairdresser's to experiment on. I send name for reference and sign—A BEE-KEEPER, Thornhill, N.B., February 24.

WIDE TOP-BARS TO FRAMES.

[5816.] On page 53 of B.B.J. for February 9 Mr. W. Woodley asks for the views of bee-keepers who have had some experience with regard to a wider top-bar to frames than that of the B.B.K.A. standard. I have for the last two years used a top-bar 1⅛ in. wide, as now supplied by most leading dealers, and can recommend it to all. I use no queen-excluders between body-box and surplus-chambers, and have had no brace-combs; in fact, the top-bars are as clean now as when first put in the hives.

I am also working a frame 16 in. by 10 in., with top-bars ⅞ in. square, with very good results.—W. W., Burbage, Wilts, February 23.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Foul Brood v. Bee Pest.—Respecting the nomenclature of this disease, the editor of the *American Bee Journal* says:—"In the *British Bee Journal* W. H. Harris urges that the name 'bee-pest' should be given to the disease now called 'foul brood.' W. Woodley wants 'bee-brood pest.' That might do better in England than here. If foul brood were the only disease to which bees are subject, or even the most severe disease, it might do to give it one of the names mentioned, just as the loose term 'the plague' is sometimes used to designate some disease particularly destructive to the human family. But in the course of time England is likely to follow the fashion started in this country, where among bees there are other diseases that might be called pests, at least one of them being rated as more destructive than foul brood.

"Mr. Harris thinks 'foul brood' misleading, because mature bees are liable to be affected by the Bacillus alvei as well as the brood. Yet the disease of the brood is the prominent thing. Moreover, a name once established has a claim to continuance just because of its established usage. If a more appropriate name can be given—well; but it will hardly be 'bee-pest' or 'foul-brood pest.'"

Two Queens in a Hive.—In *Praktischer Wegweiser* J. Stricker describes a case of two queens being in one hive together. For the purpose of introducing fresh blood into his apiary he imported two Italian queens, as he usually did every year. He decided on the two stocks to which he wished to introduce these queens, and removed the old ones. One of the colonies displayed no uneasiness and remained perfectly quiet. When ready to liberate the queen, this state of things being unusual, M. Stricker made another search, and then he found another

queen busily egg-laying. Had the Italian queen been liberated she would have probably been killed, and he therefore recommends when such conditions are noticed to make another search, as it is not unusual to find two laying queens in one hive occasionally.

Nervous System in Insects. — In the *Journal of the Royal Microscopical Society* we find an analysis of the work of V. Bauer in the *Zooligisches Jahrbuch*. He finds that the central nervous system is not completed at hatching. A post-embryonic development takes place which is continuous in the forms without metamorphosis, original in the Metabola. For the new formation of ganglia, special centres, consisting of neuroblasts, are present. Ganglionic cells arise by two divisions. The first division of the neuroblast leads to the formation of two different part-products, of which the one becomes a ganglion mother-cell, whilst the other, retaining the neuroblast character, repeats the division. The ganglion mother-cells, by simple division, give rise to ganglion cells. Ganglion cells, as well as connective tissue and tracheæ of a provisional character, degenerate partly with and partly without the aid of phagocytes.

Bees as Healers.—According to M. de Lukomski in the *Bulletin de la Société d'Apiculture de Tunisie*, bees have other uses than making honey and wax and fertilising flowers, namely, that of curing fevers. Their poison has antipyretic properties even more powerful than quinine. A few stings (he says) are sufficient to cure intermittent fevers, even the most severe, more certainly and rapidly than sulphate of quinine, the usually accepted specific. All hymenoptera—bees, humble bees, wasps, and hornets—have this property. The remedy is not expensive, and only requires courage to inflict the first sting, and then, if necessary, to repeat it until a cure is effected. This remedy, however, will not do for persons of nervous temperaments, for in their case stinging may result fatally.

Parthenogenesis and Dr. Planta.—Herr Kramer, the President of the Swiss Beekeepers' Association, refers to Dr. Planta in connection with parthenogenesis in the *Schweitzerische Bienenzeitung*. He adversely criticises Gerstung's new theory that the over-feeding of the queen with drone food causes her to lay eggs that produce drones. Dr. Planta's investigations are incorrectly explained, and an attempt is made to detract from their merit. Herr Kramer said he has had ample and frequent evidence of the great care Dr. Planta took in all his researches, which could always be depended upon for accuracy. Herr Schachinger described Gerstung's new brood-food-stream as simply an imagination.

Queries and Replies.

[3673.] *Troubles Through Swarms Uniting.* —During last summer one of my frame-hives (I have three) swarmed. Twelve days after, on returning from work I found a small swarm on a bush in the garden. I suppose it came from the same hive, as a young queen was found dead on the flight-board of parent stock, and next morning there were three more dead queens on the board. When the stock swarmed I had not cut out any queen-cells, being a bit nervous of handling to any extent. A skep which stood alongside the swarmed hive was very crowded with bees up in the super it had on top, and a few days after, this stock appeared to swarm, at the same time a skep in my neighbour's garden sent out a swarm. My wife said she could not tell one lot from the other in the air, as the bees of both skeps got mixed; however, they eventually settled as one cluster. That evening when I got home the bees of my skep were very excited, running in and out and up the front of the hive, and this continued for a day or two. They had also left the super. In September I drove the bees from skep as directed in "Guide Book" without seeing the queen. I also noticed that the brood in it was drone in worker-cells, the same as now. I united them the following day to the small swarm mentioned from frame-hive, brushing the bees of both lots on to the flight-board, and dusting them with flour as they ran in. I caught one queen and kept her a few days, when she died; the other I did not see at all. I therefore ask: 1. Is it possible that I took away the *only queen*? I could not find her yesterday. 2. Is the brood in comb enclosed the progeny of a fertile worker or of a drone-breeder? After the driving and uniting, coupled with yesterday's experience, I do not think I shall be nervous again. Thanking you for reply through your columns, I generally find what I want without asking in your replies. I send name, etc., and sign—C. A., Enfield, February 27.

Reply.—1. It seems certain that there was no queen left in hive after joining up the two lots. 2. The drone-brood in worker-cells is no doubt that of an unmated queen raised after uniting.

[3674.] *Transferring Combs and Bees to Standard Frames.*—Last spring I bought a stock of bees in a frame-hive, but now find that the frames are not of standard size, being only 12 in. long and 6 in. deep. I have made some "W.B.C." hives according to directions in the "Practical Notebook," and wish to transfer the bees and combs from the old hive to a new one. I therefore ask: 1. Shall I have to cut the

combs out and tie them in standard frames? 2. If so, when would be the best time to do it? I may say the bees have plenty of sealed stores, and some of the frames have brood in them. Any information you can give will oblige. I send name, and sign—NOVICE, Bath.

REPLY.—1. Yes; and not only so, but each comb will need a thin lath under the lower edge to support its weight. Moreover, it will not be safe to rely on the ordinary stay-tape for tying in the combs, as the bees may readily start nibbling the tape through, and thus cause a break-down if combs are at all heavy. The task of transferring combs of that size to standard frames is rather beyond the powers of a "Novice," and we advise not cutting the combs out of the frames at all. A far safer and better plan would be to set the present hive with bees and combs on top of your new hive after fitting the frames of latter with full sheets of foundation, and let the bees transfer themselves below when the queen needs room for egg-laying. 2. The best time for bees transferring themselves is about mid-April.

[3675.] *A Beginner's Difficulties.*—Will you kindly advise me as below?—Without having any knowledge of bees I made a frame-hive last spring and got a swarm from a friend. The bees appear strong at present, but on examining the hive today for the first time since it was packed down for winter, I find that the roof at edges is touching the packing, owing to my not having made the roof deep enough. Consequently, the quilts are quite wet, as is also the roof inside. This state of things must be owing to condensed water as the roof is quite weather-proof. There are holes at each end of roof for ventilation, but these do not appear to be of any use, except in the centre, where there is more space. I therefore ask:—1. Would it be advisable to move the combs and bees to a new hive at once, or wait till the end of next month? The water does not appear to have reached the bees, as there are three quilts on, but the bottom one appears a little damp. 2. I find occasionally one or two bees apparently dead on flight-board, but on taking them to a warm room they recover. Are these bees cast out as dead, or do you think they left the hive for a flight, and, being benumbed with the cold, were unable to get back into the hive on their return? 3. When is the best time to get combs drawn out from foundation, as I want to work on the storifying principle, and have only two frames of comb that I removed in the autumn. Could I begin at once feeding the bees for this purpose, or would it be best to let them have the foundation in all ten frames at once, when I put the doubling box on? Should I put two frames from brood-chamber in doubling-box when it is first put on to entice the bees up into it? Thanking you in anticipation, and also for the Chapman honey plant seeds so kindly sent, I send name and address as required, and sign—A NOVICE, Southampton, February 21.

REPLY.—1. The simplest way of overcoming the trouble will be to make a "riser" (or lift) six or seven inches high to slip on between the present roof and hive body. This will not only keep coverings dry in winter, but lifts are necessary for raising the roof when surplus-chambers are put on. Some careful bee-keepers transfer bees and combs to clean hives in spring, but it is not absolutely necessary; in fact, no one thinks of keeping a double set of hives; they only start with one clean hive and then wash out the first one transferred from, and use it for the second lot, and so on. 2. Bees so found are only chilled if they revive with warmth. 3. The best time to get combs built out from foundation is during a temporary stoppage in the honey-flow, as stated on page 113 of "Guide Book." You will require to read the instructions on "doubling and storifying" very carefully, and carry them out with no deviation, if you are to make a success of the plan. Giving ten frames of foundation in an empty "doubling box" is not advised at all.

[3676.] *Suspected Foreign Honey.*—I should feel obliged if you would say whether, in your opinion, enclosed sample of honey is *English*. I have received 1 cwt. of it, and my opinion of same is it is *at least* 50 *per cent.* foreign of low quality. An early reply per B.B.J. will oblige.—BEES, Belfast. P.S.—Name sent for reference.

REPLY.—We do not trace any sign of foreign honey in sample. It is *not* a *well-ripened* honey, but is not at all bad in flavour, which is distinctly traceable to hawthorn, as is the aroma also.

[3677.] *A Novice's Queries: Faulty Honey, Water-troughs, and Comb-building in Spring.*—I shall be obliged if you will kindly answer me the following questions in the B.B.J.:—I began bee-keeping last year with one stock, and the only honey I got from it was of a dark, muddy colour. 1. Do you think this fault would be accounted for by there being a great many poppies grown in this neighbourhood? If not, can you explain the cause? 2. A few yards distant from the hive there is a ditch, the water of which is not very clean. Would this do the bees any harm? 3. Will bees build-out foundation when there is no honey-flow on—i.e., in spring or autumn? It is my intention to get a few more stocks

this year, as I now begin to understand them better, and find your BEE JOURNAL (which I take weekly) and "Guide Book" most interesting and helpful. Thanking you in anticipation, I send name, etc., and sign myself—NOVICE, Harrogate, February 20.

REPLY.—1. It is known that poppies yield honey of disagreeable flavour and aroma; but we feel pretty sure the fault in yours will be caused by the great prevalence of honey-dew in most districts last year. 2. We do not think your bees will suffer from the proximity to a ditch, but it will be well to supply them with clean water at drinking-troughs near by. 3. In spring they will, if fed liberally, but not always in autumn. You will find information on feeding for this purpose in the "Guide Book" (page 113).

[3678.] *Hive Blown Over in Storm.*—I enclose a sample of dead bees, and will be glad if you can tell me if they have died of foul brood. The hive blew over in a snowstorm and the bees got wet. I put on fresh quilts and fixed them up all right, but there are thousands of the bees dead. I leave for France on Thursday, and should esteem it a favour if you could "wire" me as regards disease.—M. P., Hexham, February 22.

REPLY.—As "wired," there is no help, as to diagnosing disease in examining a parcel of drowned bees, and the piece of comb sent contains only pollen. Your trouble will be to get the stock strong in time for the honey-flow after losing thousands of bees by the unfortunate accident. Keep the colony as warm as possible, and by stimulating with warm food during the early springtime, the queen, if young and prolific, may rapidly build up the stock to profitable strength.

[3679.] *Suspected Disease in Fruit Trees.*—I am sending a few twigs of black currant trees from my garden for inspection. I am given to understand that the round hard lumps where the buds are is a result of some kind of disease. Quite a number of my trees are affected in this way, and so I ask if you can tell me what the disease is, and if it will injuriously affect the other trees through the agency of the bees. I would also like to know if it has any ill effect upon the bees themselves or the honey. I shall be obliged for any information you can give me. I send name for reference.—J. H. M., Chipping Norton, February 21.

REPLY.—We see nothing in what you term "round hard lumps" to indicate disease. The "lumps" are simply plump blossom buds, each of which contains the embryo bunch of fruit bloom.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

D. G. TAYLOR, T. ORMESHER, W. G. ARCHER, J. B. SPENCER, G. T. WARRAN, W. TALBOT-BRETHERTON, S. H. TOLLINGTON, and Others.—"Baby Nuclei."—We think the book will cost 2s. 6d., including postage, but will notify price when sending your respective copies on.

J. B. C. (Loughborough).—"Work for the Week."—We are obliged for your suggestions, but there is a wide difference between a gardening paper and one devoted to bee-keeping. In the latter pursuit each week's work cannot be arranged beforehand, and, besides, we are continually repeating the truism that the art of bee-keeping cannot be acquired from what is contained in our weekly issue. In other words, those who wish to be successful with bees must, perforce, provide themselves with a reliable "Guide Book" in which nearly every important phase of the work is fully described and generally illustrated. Not only so, but the weekly repetition of instructions which nine out of every ten readers know by heart would become a nuisance to all but beginners. In our monthly, the *B.K. Record*, about a couple of columns is devoted to "Work for the Month," and in this such directions as you mention are fully given.

W. STACEY (Sheffield).—Yorkshire Honey Jars.—The jars you name are, we think, not stocked by many dealers in bee-appliances for reasons known to the latter, no doubt, if not to ourselves. The best plan, therefore, of bringing your favourite jars before B.B.J. readers would be to induce the makers to make known their merits in our advertisement pages. It would be obviously unfair for us to give a "free ad." to any firm that does not think it worth while to advertise their goods in our pages.

H. S. S. (Yorkshire). — Honey-dew as Bee-food.—The sample is very poor stuff indeed, even for honey-dew. It may do as bee-food in spring, but, notwithstanding its being thin, it is beginning to granulate, and would need warming in order to melt the granules before giving it to the bees as food.

A. H. G. (Cheshire).—Cheap Honey.—We think no good would follow the publication of your letter, and it might lead to trouble, unless the statement could be verified beforehand.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING.

The annual general meeting and conversazione of the British Bee-keepers' Association, which will be held on Thursday next (March 16), in the board-room of the R.S.P.C.A., 105, Jermyn Street, promises to be of unusual interest, and we are not sorry to find that, apart from the vexed questions which have caused so great a stir amongst bee-keepers of late, there will be time for the interchange of views on bee-matters of general interest which can be discussed without acrimony or undue warmth on any side.

But, seeing that a good attendance of county representatives is both hoped for and expected, no one will grudge the time occupied in arriving at a definite conclusion, if such be possible, with regard to the amount of *bona-fide* or practical help that will be available in support of the effort to obtain legislation for dealing with bee-pest or foul brood.

We emphasise this point at the present stage of the B.B.K.A. Council's work in that direction, because the annual general meeting presents the only opportunity for taking a purview of the policy of the retiring Council, and expressing approval, or otherwise, of what has been done to benefit bee-keeping by the ruling body of the parent association during the past twelve months.

The retiring Council have done their best in endeavouring to promote the general good of the bee-industry and of those in this country who are engaged in the pursuit, and if those who are younger —while able and willing to labour unselfishly in the same spirit—can be found to take a share in this work, there should be no objection on the part of those now directing the association's affairs to see the work taken up by younger, and perhaps abler, members. The county associations have of late evinced a laudable desire to take a more active share in directing the policy of the central association, and it is to be hoped that they will, by sending their representatives to attend the annual meeting, give practical evidence of this desire.

In conclusion, we may add a line to say that the new "Claustral" Ventilating Hive, described and illustrated in our issue of February 23, will be on view at the conversazione which follows the meeting at six p.m.

Death of the Hon. and Rev. Henry Bligh.

We deeply regret to announce the death of the above-named gentleman on Saturday evening last, the 4th inst., at his residence in the Close, Winchester. Mr. Bligh will long be remembered as one of the truest and best friends of the British Bee-keepers' Association ever since its institution over thirty years ago, and the industry had no more steadfast supporter. The sad news only reached us as we were preparing for press, but we hope to give some particulars in our next issue. Meantime, the regretful sympathy of all our readers along with ourselves will be extended to Mrs. Bligh and family.

TESTING PURITY OF BEES-WAX.

We have been asked to give a simple and ready method of testing the purity of bees-wax without the expense of a professional analysis. The following method of testing will be within the capacity of any person of ordinary intelligence.—[EDS.]

To test the purity of bees-wax:—

A small piece of wax placed in the mouth and chewed should not adhere to the teeth, or become pasty, but gradually disintegrate into small fragments, and be devoid of any special savour. This test is not sufficient if the quantity of the adulterant is small, in which case the specific weight should be ascertained.

Prepare in a tumbler a mixture of alcohol and water of sufficient density to allow a flat piece of wax of known purity to float on the surface, so that the upper surface of the wax is level with the liquid. A small sample of suspected wax is then melted to get rid of all traces of air, and then placed in the liquid. If it sinks or projects above the surface it is certainly adulterated.

Sometimes adulterants heavier and lighter than pure wax are used, so that when mixed in proper proportions the density of pure wax is obtained. In such a case the following additional tests should be made:—

Put a piece of the suspected wax, the size of a small nut, into a test tube, half fill with spirits of turpentine, and carefully warm over the flame of a spirit lamp. If the solution is cloudy, or a deposit is thrown down, the solution is not complete and the wax is adulterated, for spirits of turpentine completely dissolves pure bees-wax.

After this test, a piece of the same wax is placed in a test tube half filled with alcohol and brought to the boiling point.

Allow it to cool for half an hour and then filter. To the filtered liquid add an equal quantity of water and put in a piece of red litmus test paper that has previously been turned blue by dipping in liquid ammonia and dried between blotting paper. Stir well, and if at the end of a quarter of an hour the liquid remains clear or only slightly opalescent, or if the test paper has not assumed its original red tint, the wax is pure. If the contrary is the case, the wax is undoubtedly adulterated.

If the wax resists these tests successfully in the order given above, its purity may be assumed with almost certainty.

QUEEN-REARING IN AMERICA.

By "*Swarthmore.*"

Special to BRITISH BEE JOURNAL.

In his remarks before the Pennsylvania State Bee-keepers' Association, at its annual meeting held in Harrisburg, Pa., U.S.A., December 6 to 7, E. L. Pratt, of Swarthmore, said:—

"I have been asked to prepare a paper on some queen-rearing subject for this Convention, and I think I cannot do better than to give a brief explanation and demonstration of the queen-rearing appliances we use in Swarthmore with so much success and satisfaction.

"When I first entered the queen-rearing field the laborious methods employed quite discouraged me. To continue in the business I must needs hire help or devise means to reduce labour. The latter I set out to do, and the things here before you are the results of my efforts."

Both the old and the more recent queen-rearing methods were briefly reviewed, and the necessity for a separable and easily removable queen-cell was clearly shown. To avoid the delicate surgical operations, we were compelled to perform by old methods (previous to the emerging of the young queen); a wooden cup is now used.

The top application of the "Swarthmore" pressed queen-cups was explained, and the many labour-saving points of a flange-cup were set forth by demonstration.

The process of waxing the cups, pressing the cells, and grafting them without royal jelly was gone through, and numerous questions from the floor were answered. The use of the "Swarthmore" open-top holding-frames, and the manner of applying cell-bars, incubating and confining cages to them through slits in the sheets from the tops of the hives without disturbance to the bees, was also demonstrated, and the simplicity and labour-saving points of each carefully set out.

The speaker then branched into the wholesale possibilities of the "Swarthmore" plan, showing how large numbers of queen-cells may be secured and cared for.

A number of small cups, set side by side in a little frame, so as to resemble a comb in which the breeding-queen will deposit eggs to save the long process of grafting by hand, attracted considerable attention, and brought forth much comment and many questions. It was shown how these little cups, each containing an egg, could be drawn from the frame, slipped into holding-shells, and given to the bees for queen-rearing, and how other cups could be replaced in the frame for future use in cell-getting.

Previous to his explanation of the miniature mating-boxes, the speaker quoted from his book, "Baby Nuclei," the following words of introduction:—

"It was in 1881 that I first began to experiment with section box nuclei for mating queens. Some three or four years later the plan I had been commercially successful with was published in the journals of that day and in pamphlet form under the title of 'Pratt's New System of Nuclei Management.' Never to this day have I to any extent used more than a mere handful of bees in a little box for the sole purpose of mating my queens. My little baby mating-boxes have been condemned by nearly all the professionals, including Mr. Alley, in whose yard I had the pleasure of studying with profit for some three or four seasons. In the face of all this opposition I have clung to my little mating-boxes and have improved them from year to year until we now have what is called the 'Ideal.' Time and time again have I called attention to the woeful waste of bees, labour, and material by the older mating methods, but I could get no hearing until a recent year. It so happened that I succeeded in mating a large number of queens from my little boxes fitted into frames and hung upon stakes, also attached in different ways to the sides of hives. My description of these experiments was admitted in part to 'Gleanings in Bee Culture,' which renewed interest in small mating nuclei, and the quesion now seems to command wide interest because of the wondrous saving in expense over any other method of queen-mating."

In opening the queen-mating question, the speaker said that twenty-five bees will mate a queen; fifty will do it better, but more than a small teacupful is a positive disadvantage. The design of the "Swarthmore" mating nucleus boxes was shown, and the manner of hanging them to little T-stands driven into the ground, together with the manner employed to supply them with small combs and storing them with honey, also how bees are obtained and

supplied in small lots to each little mating-box.

While on the question of queen introduction, Mr. Pratt said: "It was Mr. Doolittle who showed us how to successfully introduce virgin queens to confined and broodless bees; Mr. Alley it was who taught us the use of the tobacco-pipe for the same purpose, and it is hard for me to decide which is the greater gift. Both are golden."

"The folly of brushing the bees from small mating-boxes directly they have mated a single queen is apparent," said the speaker, "when the same bees can be made to mate queen after queen either by pre-introduction or by giving ripe cells." When the simple manner of giving cells to baby nuclei was demonstrated applause followed.

After going through the different means employed in quickly feeding the babies with a bulb and tube, or by means of little bottles, Mr. Pratt showed the Convention how substantial bee-hives are made by him from paper at a cost of only a few cents per hive and a little labour, at the close of which a standing vote of thanks was given to "Swarthmore" for the interesting paper they had heard.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5817.] Thanks are due to Dr. Elliot from all bee-keepers for the valuable article on "Experts and Foul Brood." I hope all experts will read carefully the hints given and digest them thoroughly. If only a part of the complaints made are true, there is no doubt that some of our present experts are either careless or incompetent when dealing with so insidious a foe as *Bacillus alvei*.

To make our pages bright with interesting "notes," should be the endeavour of all our readers. Each of us, in the apiary, has his own methods of working, but if all had a chance to visit the "bee-gardens" of our bee-keeping friends and see how things were done, depend on it we should learn much. Indeed, I know of nothing that conveys more of mutual advantage than comparing the various methods on which bees are managed and work got through; and I feel sure that not only would our editors be glad to receive such notes, but the regular interchange of views will, if started, prove one of the most interesting items in our JOURNAL, if the thousands who have received help and hints will as freely give for the benefit of others.

We shall shortly begin to get ready our racks of sections for use, and those who have combed-sections on hand should examine and see if they are free from wax-moth; if any combs contain honey not removed by the bees after extracting, they should be placed over a strong colony for clearing out, and these combed-sections may be intermixed with new ones when fitting up sections for use. Now that we can have the finest super foundation in sheets, so thin that a pound fills 100 sections, it is good policy to use full sheets, and I fully believe that the balance will be on the right side. If any of our readers doubts this assertion, let him divide his apiary fairly in two parts, and for one half use "starters," and the other half full sheets, and mark the result at the end of the season so far as regards economy in working. Also if you can spare the cash have three racks of sections for each hive, but do not try to manage with less than two racks for each strong stock, with a few over for an emergency when honey is coming in fast. In the latter case place the third rack under the second, when the "super-clearer" is put under the first one, when the latter is ready to take off: then these full ones can be refitted to give room to other hives as required. This "note" refers only to apiaries of, say, 8, 10, or 12 stocks. The larger bee-keepers are quite able to carry out their own plans and are provided with an outfit suitable to their requirements.

The sections used as "baits" should be placed judiciously in the rack, and if there are any combs with drone-cells, do not put them in the centre row but on the outsides, unless excluder is used, or you will tempt the queen up into your super. Another point I would commend to all purchasing frames for use, is to insist on having them with top-bars 1⅛ in. wide. These frames will give so much satisfaction in the future that the extra cost will not count, as no excluder zinc will be needed when working for sections, and they will prevent brace-combs, and almost stop trouble from propolising. Thus, if you wish to spread the brood-nest or interchange frames the combs will be built as

flat as a board, i.e., when full sheets of foundation are used with a good strong swarm.—W. Woodley, Beedon, Newbury.

FOUL BROOD *v.* BEE-PEST.

[5818.[Will you allow me to make two or three brief remarks on the strictures connected with my name in the *American Bee Journal*, as quoted on page 87 of last week's B.B.J. ?

First, both the words "foul" and "brood" are certainly sometimes inappropriate, and, therefore, inadequate to connote the disease to which, in combination, they have been applied. Secondly, in England we have no disease in our apiaries comparable, in virulence and contagiousness, to that due to *Bacillus alvei*, and, therefore, deserving *par excellence* the name of bee-*pest*. Thirdly, it does appear to me that the establishment of a misleading and inadequate term is no reason against changing it for a much better one, especially when there is more than a probability that official and Parliamentary approval will be tacitly given to the more appropriate name, which, in fact, has been, concurrently with the old one, already adopted by our Board of Agriculture.

I should like to inform your correspondent (No. 3679, page 90), that the round, hard buds on his black currant bushes are due to the "black currant mite" (*Phytoptus ribis*). If he will write to the Board of Agriculture and Fisheries for their Leaflet No. 1, he will get (free of charge and of postage) full information on the subject. I have been obliged to destroy all my black currant bushes owing to the ravages of the mites. — W. H. Harris, Hayes End, Middlesex, March 6.

[Our friend Mr. Harris might have taken a different view had he seen the twigs sent.—Eds.]

"SALE OF POISONS."

[5819.] As the makers and dealers in bee-keeping appliances are now having their catalogues printed, I wish to sound a note of warning as to the sale of "poisons" by unqualified persons, as many appliance makers, in their lists, offer for sale carbolic acid, either pure, or mixed with some other liquids. As carbolic acid is in the second part of the Poisons Schedule, it cannot be sold in Great Britain except by persons qualified as chemists or medical practitioners. Of course, proprietary articles containing scheduled poisons are subject to the same restrictions as the poisons themselves. The following is a copy of the order: — By an order of the Privy Council, dated July 26, 1900, liquid preparations of carbolic acid and its homologues containing more than three per cent. of those substances (except any preparation used in agriculture or horticulture, and contained in a closed vessel labelled with the words "poisonous," the name and address of the seller, and a notice of its agricultural or horticultural use) was added to Schedule A, Part II.

This may save the appliance dealers and makers some trouble.

I shall be pleased to answer any questions on the above.—Hy. W. Clarkson, London, S.W., March 2.

INFLAMMABILITY OF CELLULOID.

[5820.] Although it is a well-known fact that celluloid is highly inflammable, and when brought into contact with or even in too close proximity to fire, it flares up readily, I am assured that, used in the hive interior with even ordinary care, it adds no new terror to bee-keeping. Tests have been very carefully made, and sheets subjected to all likely accidents from contact with smoker sparks and no ill effects followed. Personally, I am of opinion that only gross carelessness in handling a smoker could bring about such a contingency as that contemplated by the writer of 5815.—D. M. M., Banff.

BEE NOTES FROM NORTHUMBERLAND.

[5821.] As a bee-keeper located at Cornhill-on-Tweed, close to the Cheviot Hills, I send a few notes referring to the past season of 1904 in our district. It was for me, on the whole, a little better than the previous year, but my take of flower-honey was very poor indeed. The bees got almost nothing from the clover; it was, as the saying goes, "plenty of runches, but very little in it." The heather then came on, and as it promised well I packed up my bees and started for the moors, where the heather was in splendid bloom, and the bees had about nine days of sunshine; but bad weather then came, and altogether spoilt the heather, so no more honey-gathering was done. My total "take" from eleven hives was 180 lb. in sections. The prices I got for these were 1s. 9d., 1s. 6d., and 1s. 3d. per 1-lb. sections, according to grade.

I may be allowed to say in conclusion that I have sent my vote in to Mr. W. Woodley against the proposed Foul Brood Bill, which I object to, and would certainly not allow any one to have a right to examine my apiary if I could help it. Wishing all our bee-brethren more sunshine and a larger honey yield in 1905, I send name, etc., and sign—A Son of the Soil.

(*Correspondence continued on page* 96.)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

We are glad to have Mr. Judd's testimony, showing the value of our village schoolmasters in helping beginners in bee-keeping. There is no doubt in our own mind with regard to this, in view of what has appeared in our pages. Our friend's bee-notes read as follows:—

"In the year 1897 a friend of mine brought his bees to my father's orchard, and for a time I was simply a spectator. Ultimately I began to help him in his manipulations, and gradually became bolder, and more indifferent to a few stings. In the year 1900 my friend presented me with a swarm, and having bought a hive I made my start as a bee-keeper. In the autumn of the same year I purchased a 'Wells' hive, and with the help of a few driven lots of bees had three stocks for wintering, two of which came safely through. In the summer of 1901 I bought another hive, in which was placed a swarm of my own, seen in the photo, and increased my stocks by three purchased swarms, making a total of six stocks, as seen in photo, the now unoccupied 'Wells' hive coming in very useful to hold my smoker, veil, etc. That year I obtained only about 40 lb. of surplus honey. All six stocks wintered safely, and spring, 1902, found me in fair order for a good season. During that year I turned my attention to building up my stocks, and in spite of drawbacks managed to secure 80 lb. of surplus. I again successfully wintered all my colonies, and though 1903 was a wretched year I harvested 150 lb. honey, which compared most favourably with other bee-keepers in this district.

"During the winter of 1903-4 I lost one stock, but had a very good swarm on May 25, 1904, which again brought my number up to six. The season 1904 was very promising here as elsewhere at the start, honey being abundant while the fruit-blossom lasted. At this period, owing to the plentiful income, all my stocks got into prime condition, and we began to anticipate a grand harvest, but the subsequent drought, followed by honey-dew everywhere in our county, dispelled all thoughts of this, however, and I only harvested 70 lb. honey of inferior quality.

MR. ARTHUR JUDD'S APIARY, CHILWELL, NOTTINGHAM.

"Reverting to photo, the figure on my left is our village schoolmaster, who is an enthusiastic bee-keeper. He very kindly gave a look round my apiary each day in the swarming season, which was very helpful to me, as I am away in Nottingham all day.

"The 'Wells' hive I have kept unoccupied since the first year I had it, as I found it unmanageable.

"Though my experience has carried me through some depressing seasons, and, in consequence, I have not had that success with bees which has been the good fortune of some B.B.J. readers, I have found bee-keeping an interesting, instructive, and profitable 'hobby,' and with more favourable climatic conditions I hope to do better than hitherto. I have read the 'Guide

Book' and the *B.K. Record*, and I am greatly indebted to Mr. Peter Scattergood, of Stapleford, for advice always given freely. I also have to acknowledge expert help and advice from Mr. Puttergill, of Beeston."

CORRESPONDENCE.

(*Continued from page* 94.)

CELLULOID FOR BEE-KEEPERS' USE.

[5822.] It may be in the recollection of some older readers that when first Mr. Reid brought to notice the use of celluloid for quilts, excluders, etc., in the B.B.J. some years ago, I myself wrote you to same effect as your Thornhill correspondent, on page 87 last week. In reply to my note—which was only a word of warning with regard to care in the use of smoker—Mr. Reid was rather severe on me, but I now again wish simply to warn bee-keepers, and urge carefulness in doing anything which involves the use of fire, if there is celluloid near at hand, as I have actually known a blaze to result from disregard of this caution. I say this in view of the fact that I (along with other appliance-dealers) still stock celluloid, as I did then.—GEO. ROSE, Great Charlotte Street, Liverpool.

MISNAMING HONEY.

[5823.] In view of the question of cheap honey being offered for sale as "finest Scotch," I feel it my duty to let the readers of the B.B.J. know what has come under my notice in connection with selling honey under a false name. Let me say what I know to be the truth. I know a gentleman who buys foreign honey in barrels, melts it down, strains it, and after jarring it off in liquid form disposes of same by advertising it as "new light run honey." Now, if this is not deceiving the public I should like to know what is, and sincerely wish that this sort of thing could be stopped; or if not, I think the public should be warned against buying honey unless it is guaranteed to be as described. I send name, and sign—F. K. S., Essex.

HYBRIDISING AN APIARY

FOR SECURING BEST RESULTS.

[5824.] As I am thinking of introducing pure-bred Ligurian and Carniolan queens into my apiary of Blacks and Black-Ligurian hybrids, I should be much obliged if either you or your readers could favour me with their experience of the following crosses: 1. Ligurian drone with Carniolan queen. 2. Carniolan drone with Ligurian queen. 3. Black drone with Carniolan queen. 4. Carniolan drone with Black queen. The points in which I am interested are prolificness, industry, and temper. I send name, etc., for reference.—L. A. V., Rye, February 27.

[We will be glad if readers who have had experience on the above lines will send on a few particulars for publication in our pages.—EDS.]

HELP IN LAND BUYING.

[5825.] Referring to your reply to query No. 3656 (page 49), and the request for information on land purchase, I beg to say that having known the "National Freehold Land and Building Society" for thirty-nine years, and compared it with other building societies, I think "J. E. S." would there find the help he wishes for; and if an arrangement is come to, he may rely upon having neither fines nor fees charged, and no more than 5 per cent. for the loan. I send name, etc., and sign—C. B. S., Essex, February 25.

ON THE CARE OF BROOD-COMBS.

[5826.] Having had several requests from beginners to contribute something to the pages of our JOURNAL, I have thought that it might be helpful to some of them if I offered a few hints gleaned from my own practice and the writings of more capable bee-men on the care of combs. I consider this to be quite one of the most important duties, not only of the winter months, but of the whole bee calendar, and one which is, at times, only too sadly neglected, by even the more experienced bee-owner.

Take care of the combs, and the colonies will almost take care of themselves. The time so spent will be repaid to you in hard cash value, for the combs are worth the care, and if the one who should do so will not look after them, another will, and that other is usually some variety of entomological scavenger, who will put them to his own mis-use.

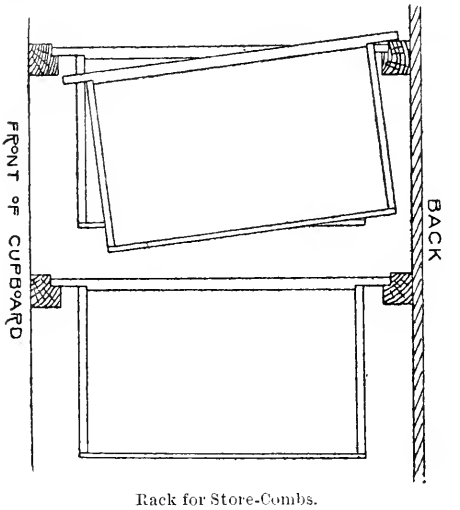
Spare combs, in good condition, are undoubtedly the greatest help either to increase the number of colonies, or to make up for winter losses, and they are worth every moment of the time expended upon them.

How to Store.—The receptacles which I like the most, perhaps because I can most easily obtain them, are the usual 1-cwt. cane-sugar boxes, which cut down to a convenient size. This is accomplished by first removing the two top side boards, one of which is later cut into two lengths and replaced, thus lowering the depth. The ends, which now project, are then sawn down to the future height of side, about nine inches, as this leaves room for napthaline, etc., in the bottom of the box, and the removed end cleat is renailed to

the outside, thus forming a cleat for lifting purposes. The half sides are then nailed on; and the top edge planed down to an approximate level. The width of these boxes inside is usually fifteen inches, and where long top bars are used an outside cleat may be nailed along the side of the box. These boxes are lined with stiff brown paper tacked neatly and closely to the sides, and a cover of similar material is folded and tied with string below the cleat.

Such boxes hold about a score of combs and may be piled up in small space, and are much more satisfactory than all sorts and sizes of makeshift hives. They are practically moth-proof, and access is easily obtained, whilst the contents may be clearly designated up on the card tacked to the outside. It is said that some Continental bee-keepers store their empty combs in sand, filling the cells full of the material, and covering the combs. If the pest were severe enough to warrant the trouble, this plan would seem to offer protection to combs which were actually free from eggs and larvæ.

For ease and convenience of handling spare combs during the season, I have not seen any more convenient arrangement than the cupboard rack illustrated below:—



Rack for Store-Combs.

When to Store.—Unquestionably, no comb should *ever* be allowed to lie about, but should immediately be transferred to its place. Left about, it is not only a temptation to the wax moth and the prowling bee, but runs the risk of damage by more clumsy enemies. Wherefore, put away the spare combs at once, clear up as you go along, and see them safely into the box or rack. Do not, however, place unexamined combs, with possible grubs lurking along the top bars, amongst combs which you are fairly sure are free from the pest. Examine so far as you can, and quarantine them if possible.

Sorting.—But the season in full swing does not perhaps allow of so much attention to these important items of bee-furniture as they deserve, and there is sometimes an accumulation which should be sorted over and cared for without delay. Where there are not many combs, the necessity for sorting may not be so clear, but it exists nevertheless. It is so much more handy to be able to lay one's hand at the urgent moment upon the right article, the particular comb, that it is surprising that those of us who realise the necessity are not more precise in this respect. Even where combs are few, there are probably several varieties. Where the beginner is really interested in his bees, he usually plans some increase of stock, and this implies frames fitted up with foundation. Then there are the already completed but empty combs, and the combs containing sealed stores. Where combs have accumulated, there are, possibly, partly-built combs from starters only, which should not be mixed with the other classes. And, lastly, there are the old and faulty combs which require to be doctored, repaired, or discarded altogether; separately treated, in fact. Here are some five varieties which I may perhaps be allowed to deal with in turn.

The Perfect Combs.—And how few of the ordinary combs could be classed as perfect. Would that we might have a special exhibition of these at the shows, for the better education of the multitude. The perfect combs, I say, should be dealt with first, and my own treatment consists in thoroughly washing them by means of a hydrapult or garden syringe, using Condy's fluid or Izal in the washing. I have a simple holder upon which the comb is supported inside the barrel of the extractor from which the gearing has been removed. A large, home-made strainer is hung below the honey-gate to catch the dead bees, bits of wax, or lumps of pollen which would otherwise clog the syringe, and the fluid is allowed to run into a bucket for use until too dirty, when a fresh supply is substituted. For a first or simple washing of healthy combs, I have arranged a short length of hose pipe with a suitable rose, which is a great saving of labour, the washing of a large number of combs being quickly accomplished. Here, be it noted, I would rather wash out a comb containing a small quantity of unripe store than allow such to remain and ferment.

All combs after washing are to be thoroughly and quickly dried in a warm place, and then stored as described.

The Partly-built Combs are to have the drone parts cut away, the pieces of wax being immediately transferred to the tin box or other receptacle.

The Sealed Combs, the stores in which are to a large extent their protection, are to be carefully graded as to quantity and quality of contents, as these may be the first required for spring use. Treat them as carefully and in the same way as you would treat sealed sections.

Foundation ought not, in my opinion, to be put into frames until nearly the time for its use. It is better kept in a wooden paper-lined box of the right size, and stored in a hot place, such as the cupboard which contains the hot-water cylinder to be found in most houses nowadays. Frames completely fitted up take much more space, and are, therefore, not so easily stored in such a place, but they may be nailed up and wired ready for the last operation, the fitting of the foundation when necessary. They may then be hung up out of the way, and there is no risk of perished or brittle sheets, though most of the old hands know how much improved foundation becomes, and how nearly a poor sheet may be restored to its original freshness, by warming it thoroughly just before inserting it in the hive.—L. S. Crawshaw, Ilkley.

(*Continued next week.*)

OWNERS' RISK RATES.

[5827.] Referring to Mr. Newman's letter (5771, page 29) in B.B.J. of January 19, *re* claim preferred against the Great Eastern Railway Company for sections broken in transit, may I say that being a railway-rates' clerk by occupation, I was very interested in the reply received by Mr. Newman's solicitors from the railway company's solicitors. It is just the reply I should expect them to give to his application for compensation, and is an everyday occurrence. I think it would be very remarkable if any one did obtain payment of a claim when an owner's risk note has been signed. They (the company) are legally justified in their attitude, but it certainly comes very hard on the bee-keeper who has lost his sections.

In the general railway classification of goods, honey in the comb is classified as follows:—"Honey in the comb, in sections, in cases, at owner's risk only, class 4 (rate)"; and the same are only accepted for conveyance by passenger train when an owner's risk note has been signed. The signing of this note protects the railway company from all responsibility for damage or loss, except when same is caused by wilful misconduct or negligence on the part of the company's servants, which it is next to impossible to prove.

As many bee-keepers have to send comb-honey, etc., by train in order to dispose of their produce, the question of responsibility on the part of the railway company is a very serious one. Sections are so very fragile that I do not think they will ever be carried at company's risk, seeing that to do so would soon cause them to be inundated with claims. It therefore rests with the sender to see that his honey is packed as securely as possible in order to lessen the risk of their being smashed. One has only to see the way in which boxes and other things are banged about by porters on the line, to cause no wonder that goods get smashed occasionally. If packages of sections were handled more carefully while in the possession of the railway company it would help to greatly benefit the bee-industry in this country, but the present system must tend in an opposite direction. Of course, any one who understands the magnitude of a railway will see things in a more favourable light than the general public, but there is room for great improvement in the handling of goods.

While hoping that any future sections which Mr. Newman may send by rail will escape damage, I do not think that he will ever obtain compensation for such if a signed "owner's risk" note is in the possession of the railway company, even if he took it to Court.

I send name and sign—Lilac, near Derby, March 3.

DEALING WITH FOUL BROOD.

[5828.] Will Dr. Elliot (who writes on page 77) be good enough to say if the same solution of Beta Lysol can be used when examining a diseased hive, be used for a second examination and treatment of a diseased stock; or must a fresh supply of solution be used for every washing? 3. I would also like to ask: — Can Dr. Elliot explain why some stocks during, and after, a good honey-flow seem to overcome the disease known as foul brood?—J. N., Langwathby, March 5.

INCREASING STOCKS.

PROTECTING SKEPS IN WINTER.

[5829.] Last year I went in for increase of stocks, as I had a lot of empty frame-hives by me, and in doing this adopted a very simple and cheap method. I got several large and early swarms from some straw skeps. In the previous autumn I examined my skeps to make sure that they all had plenty of stores to last the bees well through the winter. Then I bought several large cheese-boxes, and cut holes in lower edges for the entrances, and put the skeps in them with a sack or two to fill up the spaces round the sides, etc.

Then with the cheese-box lid and an earthenware pan over all to keep out the wet, thus each skep is made complete. If plenty of honey is given to the bees in the autumn, they will want no spring feeding. I did not touch mine until after swarming time, and I had some very large and early swarms. The less they are interfered with the better. The cheese-boxes are not only warm and dry, but they prevent the blue-tits from pecking the entrances of the straw skeps to pieces, and they look passable. — W. ALLEN, Rutland, March.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

February, 1905.

Rainfall, ·76 in.
Heaviest fall, ·35 on 26th.
Rain fell on 16 days.
Below average, 1·26 in.
Sunshine, 83·9 hours.
Brightest day 21st, 8·3 hours.
Sunless days, 7.
Below average, 6·1 hours.
Maximum temperature, 53° on 14th.
Minimum temperature, 29° on 26th.
Minimum on grass 21° on 20th.
Frosty nights, 7.
Mean maximum, 44·6.
Mean minimum, 36·4.
Mean temperature, 40·5.
Above average, 2·8.
Maximum barometer, 30·67 on 15th.
Minimum barometer, 29·25 on 27th.

L. B. BIRKETT.

Queries and Replies.

[3680.] *Baby Nuclei, by "Swarthmore."*—Seeing the advertisement in B.B.J., some three weeks back, of a pamphlet, price 2s., on the "Swarthmore" system of raising queens, I sent to the address given, viz., "E. L. Pratt, Swarthmore, Pa."—but have had no reply yet. Seeing, therefore, a notification in your issue of this week (page 90) that the pamphlet will be 2s. 6d., or thereabouts, I am wondering if I have sent sufficient money to cover postage, thus causing delay. I have failed to find Swarthmore, Pa., in either the "A.B.C." or "Postal Guide," so will you please say if it is in Scotland or America? I send name for reference. — E. H. P., Kent, March 3.

REPLY.—We print above query in full mainly because others may possibly fall into the same error as yourself from haste in reading, or want of thought. In reply, then, let us say first, the book in question has not been advertised in our pages or anywhere else in this country to our knowledge. It was sent to us by the author (who is his own publisher) for review, and dealt with—from this standpoint—on page 61 of our issue for February 16. We there gave name and address of author as it appears on cover of the book, viz., E. L. Pratt, Swarthmore, Pa. (i.e., Pennsylvania). We regret not having added U.S.A. after Pa., which is always shortened thus by Americans. But it was, to say the least, unwise to send a postal order in payment, and probably a 1d. stamp on the letter, because Mr. Pratt would not only have 3d. surcharge to pay for insufficient postage, but the postal enclosed would be troublesome to cash. As stated last week (on page 90) the book will probably cost 2s. 6d. post free, and we expect a supply in course of the next few days.

[3681.] *Cleaning Old Frames.*—What is the best way of cleaning old frames? The amount of trouble I have experienced in getting two dozen "scrupulously clean" leads me to think I would rather buy new ones. After being taken to pieces and thoroughly boiled, the wax does not leave the wood, or cools on it again before the bar can be manipulated—as for chinks, they seem hopeless. I should like to be able to put in my hives new wax and clean frames every second year, if that is what you recommend—but this must be a heavy tax on the industry in the form of labour or outlay, unless there is some easier way of cleaning them. I send name and sign —OLD FRAMES.

REPLY.—If used only in healthy hives there is no need to do more than scrape away the propolis and wax attachments after cutting out the old combs. It is not worth while taking them to pieces or boiling. On the other hand, frames—whether new or old—removed from hives in which there has been disease should be burnt.

[3682.] *Syrup-Food for Spring Use.*—As a new beginner, and reader of the B.B.J. every week, may I ask, through the B.B.J., if my bees should be fed at the end of the month with syrup made according to recipe No. 5, page 167 of "Guide Book"? Or, give food according to instructions laid down on page 109 of "Guide Book," under the heading of "Feeders and Feeding," as there is a difference of two pints of water between the two? I enclose name and sign —J. E. E., Nantwich, March 4.

REPLY.—Recipe No. 5 is the one for use in syrup-making for spring and summer use. No. 6 recipe is, as will be seen on page 167, for autumn food, to be consumed during winter; hence its being made with less water than the former.

[3683.] *Thick Honey as Bee-food.—Adding Frames in Spring.*—I have some honey left

from last year which is now quite thick; and so I ask: 1. Can I render it clear by heating, and give it to the bees as it is, or should a little water be added to it? I am sure the bees must be getting short of food. Could I give the honey to them at once? 2. Each year I put in two frames with brood-foundation; ought these to be put in the middle of the brood-nest or at each end?—I send name, etc., and sign —BEE-WOMAN, Cambridge, March 7.

REPLY.—1. If as, we suppose, the honey is granulated, it will need to immerse the vessel containing it in warm water till reliquefied, and must be thinned-down to the consistency of ordinary syrup-food. It may then be given at once if bees are really short of stores. 2. Insert the new frame of foundation in centre of brood-nest as soon as four or five frames are well covered with bees.

[3684.] *Spiders inside Hives.*—Having been rather anxious about the welfare of one of my hives, I took the opportunity to-day of a slight improvement in the temperature to make an examination of it. I discovered under one of the frames a large spider, and all the lower part of the adjoining frames was festooned with webs, in which were suspended the carcases of 30 to 40 bees. Also in one of the cells of the outside frame I found a cocoon containing a young spider. I should be glad if you would tell me whether this is an ordinary occurrence, as I never remember to have seen a mention of spiders *inside* hives. I suppose it is probable that its presence would not have been tolerated by a stronger colony. 2. I also noticed that several isolated cells in the honey store contained a thick dark liquid, while the rest of the honey was quite clear and thin in consistency. Can you account for this? Thanking you in anticipation for your replies to my queries, I send name and sign—E. K. H., Brondesbury Park, March 7.

REPLY.—If there is vacant space in a hive and the stock is weak, spiders may use the vacuum for spreading their webs; but it is a very uncommon occurrence, because bee-keepers usually take care there are no such spaces in their hives. 2. We rather think the "thick, dark liquid" is pollen that has been covered with a layer of honey to keep it from hardening.

[3685.] *Spoilt Honey as Bee-food.*—When melting some honey which had become partly granulated last October, I placed about ½ cwt. of honey in an earthenware pan, and the pan in a boiler. The pan was upset a little, and some water got into the honey, with the result that the honey was spoilt. I enclose a sample of it, and shall be glad if you will say whether it is suitable for feeding bees in the spring?—E. E. T., Cowbridge, March 7.

REPLY. — The thin syrupy liquid as sample is very unsuitable as bee-food in its present condition. It should be strained through muslin and have as much cane-sugar added (by stirring in while hot) as will make it of the consistency of good thick bee-syrup.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

F. E. R. (Walthamstow).—Moving Bees in Frame-Hives.—If the distance from their present stand is not over (or under) one mile the bees should be moved as early as possible, not only because they will do better when taken further out into the country, but there will be no risk of them returning to their old stand if moved now.

P. MARTORELL (Heatherleigh). — Instruction in Apiculture.—There is no fixed rule with regard to charge for instruction in bee-keeping, though competent teachers take pupils at a moderate charge. If willing to work in a large apiary on the terms you suggest it might be well to advertise your offer in our pages.

B. Co. (Birmingham).—Bee-Forage. — The spring heather sent is the true *ling* (*Calluna vulgaris*), and unless the place it grows in be unsuitable it should yield heather honey of good quality and in abundance in some seasons. We should need a bloom of the "yellow flower" mentioned, as many flowers of colour are good forage for bees.

J. N. (Langwathby).—Diagnosing Disease. —We cannot express an opinion with regard to foul brood unless a suitable sample of comb is sent.

NOVICE (Kent).—Bee Nomenclature.—The dead bee sent is not a queen. It is a worker that has suffered from abdominal distension which accounts for the increased length.

A BEGINNER (Olney, Bucks).—Continental Double Hives.—1. There are no hives made in this country with movable divisions used for the purpose of uniting two stocks at will. 2. We see no advantage in the system of twin hives beyond being able to allow the progeny of two queens to work in a common super, as in the "Wells" system.

*** Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial. Notices. &c.

BRITISH BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING AND CONVERSAZIONE.

As stated last week, the annual general meeting and conversazione of the B.B.K.A. will be held on Thursday, March 16 (to-night) in the Board Room of the R.S.P.C.A., 105, Jermyn Street, near Piccadilly Circus. The general meeting opens at 4 p.m., and concludes at 5.30, when light refreshments will be served.

The *Conversazione* which follows will open about 6 o'clock, and Mr. T. W. Cowan has promised to explain (with the help of models) the main features of the "Claustral Hive and Detention System," and open a discussion thereon. Other subjects suggested for discussion are the "Swarthmore Methods of Queen-Rearing," and "Railway Rates for Bee-Produce."

All members and friends interested in bee-culture are cordially invited to be present at 5.30, and it is hoped there will be a good attendance.

REVIEWS.

Der Bau des Bienenhauses, by Th. Weippl. Published by W. Frick, Graben 27, Vienna I. Price kr 2.40.—This book of eighty large octavo pages treats of the construction of bee-houses. It is profusely illustrated with seventy engravings, in addition to the frontispiece, showing Dr. Dzierzon in his apiary. Full details are given for constructing and putting together the different parts, so that any one following the instructions will find no difficulty in making a bee-house. Almost every description of house is shown and described, from the open shed to the portable house, and wagon for migratory bee-keeping. Chapter 10 is devoted to describing a house with a verandah which can be closed so as to form a dark chamber for preventing bees flying out in winter and during inclement weather in spring. In principle it is like the Claustral hive, described on page 71 of B.J., on a large scale.

L'Abeille Domestique, by Lucien Ieles. Published by Garnier Frères, 6, Rue des Saints-Pères, Paris. Price 3 francs.—The author is the Secretary of the Société Centrale d'Apiculture, and he writes in a pleasant, clear, and concise style, making the book agreeable reading. One gets so tired of the multitude of books on bees and bee-keeping got up by servile imitators, who unscrupulously plagiarise from one book and another, and fill the pages with well-known illustrations, frequently taken from dealers' catalogues, and without giving the sources of their information, which they pass off as their own, that it is a relief to come across such a book as the one before us, where the author honestly gives the sources of his information. There are, with the copious index, 351 small octavo pages, and the book is divided into four parts: 1. "The Apiary," in which the various hives and races of bees are discussed, the author mentioning the best localities and the reasons for his preference of certain races. 2. "The Anatomy and Physiology of the Bee." 3 "The Management of the Apiary." 4. "Bee Products." All the branches of bee-keeping are ably treated, and sixty-nine pages are devoted to the products of the hive and how to utilise them, a branch of the subject not sufficiently studied in this country. There is an appendix, in which the author gives a summary of the state of bee-keeping in different countries of the world, which will be read with pleasure by those interested in the subject. There are upwards of 130 original illustrations, beautifully drawn by M. A. L. Clément. Authors and discoverers are honestly mentioned, and credit is given to whom credit is due. We have much pleasure in recommending this book to our readers who know the French language.

Die Biene und die Bienenzucht im Altertume, by R. Billiard. Translated by Rektor Breiden. Published by Th. Gödden, Millingen, Germany. Price one mark.—This is a translation from the French *L'Abeille et l'Apiculture dans l'Antiquité*. This book contains in its 108 pages a very interesting compilation of the theoretical knowledge of bees possessed by our predecessors, more especially by the Romans and Greeks, and in the Middle Ages. It also explains the early methods of bee-keeping, and the value of honey and wax in those days. Adulteration was even known then, and the penalty for this was the chopping off of a hand. What a good thing that the good old times are no longer with us, otherwise there would be many going about with only one hand. The book is exceedingly interesting, and we can recommend it for perusal.

Praktischer Geschäfts und Notizbuch für Bienenzuchter, by Th. Gödden, Millingen.—This is a small octavo note-book of twenty-four pages, ruled for notes suited to German bee-keeping, similar to Mr. Cowan's "British Bee-keeper's Practical Note-book" upon the plan of which it appears to be compiled.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of February, 1905, was £429.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

ARE PRICES FALLING?

[5830.] "Maxwell" (1750) writes: "Keep twenty hives, and on a moderate computation you have a profit of £16 from the honey, £1 10s. from the wax, and £2 10s. from sale of swarms, so that the profit will be £1 per stock." The prices are here about 6d. for honey, 1s. 6d. for wax, and 10s. for swarms. In his calculations and estimates, he tells us he chooses to be moderate so that his readers "may be agreeably disappointed." "Bonnar" (1795) makes a higher estimate, valuing average profits at 30s. per hive. As showing on what they based their calculations, we get a further side-light on the value of honey and wax. In 1792, it is recorded "when hives are heavy and good in general, honey will sell for less than 6d. per lb., and the wax for less than 1s. per lb.; but when they are light and bad, honey will sell for more than 1s. per lb., and wax for 2s." It seems to me that the "good old prices" then were much like our present current ones.

Going back nearly a century, we find it written:—"Sixty pounds of honey at 6d. would make a profit of 30s. from a colony." But it is really worth more because of the goodness and superior excellence of the honey from colonies, the far greater part thereof being "pure virgin honey and perfectly neat and fine." Dr. Warder himself made a profit of £50 a year from his bees, his hives being of the Gedde type, but smaller, 14in. by 10in.—not so far removed in dimensions from our hives of the present date. I calculate that he sold his honey considerably under 1s. per lb. Harking back still further, we find that in 1655, the price of *good* honey was from 1s. to 1s. 4d.

It is clear from many authors that the ancients made a constant revenue from their bees without killing them at any time. Vano alleges that in his time many produced a very fair yearly revenue, making it well worth their while to prosecute the industry, and he gives favourable statistics to encourage people to keep bees—yet his honey prices are not high. He further quotes figures to show that a Roman Consul, in Spain, made as much as 10,000 sesterces from his bees, honey and wax. Even with these small figures, all ancients agree that bee-keeping pays. Merve "gained large profit and delightful observation" from his bees, honey, and wax. Even with these stalls, and usually but half that number, but valued his honey and wax at 20 nobles. His prices could not have been very high. Hyll says "a great profit can be made of bees carefully and wisely guided"—wise words these last four are, whether they are Hyll's or George Painter's. Lawson estimates "forty stocks well ordered will make more profit than forty acres of ground," and that "twenty stockes or stooles will keep your orchard."

So much for honey. In regard to the price of bees, both swarms and hives, the same writer tells us "a Maye's swarme is worth a mare's foale." Warder, on the other hand, gives us a very low estimate of the value of bees in his time. "Bees may be bought for 2s. 6d., others 5s., but hereabout 10s." On the other hand he makes a sanguine estimate of their increase—10 becomes 25 the first year, 60 the second, and 150 the third—but cautiously adds, parenthetically, "barring casualties, and if they prove good years." In three years from 10 hives you have 160, more or less, as the goodness of the weather allows. "Set all down as equal to 5s., and you have £40." Huish, a century ago, says stocks can be got from a guinea to 10s., or even less; swarms from 15s. down to 5s.; and honey varies in price very much from 1s. 6d. to half that sum. Again and again, from Butler's time onward, we get the price of honey quoted as from 6d. up to 1s. Stocks at from 15s. to 20s., and swarms at 5s. up to 15s. I, therefore, come to the conclusion that for about 400 years the price of honey and bees, good years and bad years together, has been very much the same as it is now, as recorded in the advertisement pages of the JOURNAL. I started my investigation under the impression that I would find prices ruling high, and gradually sinking down to the lowest point of depression; but I take comfort from the thought that one hundred years ago, and even two hundred years ago, honey was selling in good years at 6d. per lb., and in bad years at 1s. Some, "by reason of its goodness," went at a higher figure, just as at the present day we can sell our heather honey at 1s. 3d. and 1s. 6d. I had a feeling, handed down traditionally I presume, that swarms could not of old be purchased at a smaller figure than a "golden guinea," but I have above given ample proof, and could supply far more additional testimony, to show that they could be got, as now, for half that

figure. Wax has always sold for about 1s. 6d. per lb.

Some Bad Bee Seasons.—It would be an interesting study, if one had the time and opportunity, to determine if these come in cycles. Fragmentary as the few statistics I am able to produce are, they serve to show us at least that, say, for the past twenty years, we have had no undue proportion of these. Butler records that 1611 and 1621 were bad years. From Purchas we glean that 1648 and 1651 were not favourable to honey gathering, and that they were inimical to bee life. In the first year "the perpetual rains washed away all the substance in the flowers, so that not only swarms but old stools perished." He himself lost about half a hundred. In the latter year, "of twenty swarms he obtained before mid-May, only one solitary one survived till next year." All others had died. As pointing out the cause of loss, we are informed "the most temperate weather occasions a greater decay of bees. Gloomy, cold, and close weather shuts them up and saves stores."

In 1759, after the winter, there were great losses, but Mills attributes this not to the bad winter, but to the bad summer which preceded it. 1782-3, and again 1788, must have been bad. In one case, in the latter year, we find fifteen out of sixteen dying out. I merely pick these out of a goodly number taken almost at random. About a century ago they seem to have had a run of unpropitious bee seasons. Here are a succession of them: 1806, 1810, 1815, 1820, 1824, 1828, 1829, 1833, and 1837. I could multiply examples, but bald figures make dry reading. Some of the reasons, however, given for the failures may be interesting:—"Spring came so slowly up our way." "The continuous rains washed out the nectar." "The summer was so dry that vegetation was for most burnt up and failed to secrete." "One year the winter was so moist and mild, it wore out bee life"; another the "late gathering led to great devastation from dysentery." Superabundance of moisture did the mischief one year; drought proved as destructive another.

"*As Others See Us.*"—"England (including Scotland and Ireland, of course) has a large number of apiaries, has several bee-keepers' journals, and various bee-keepers' associations. In fact, she stands among the Great Powers of Europe in regard to bee-keeping processes." Thanks, Mr. Root. I reciprocate — America is *the* greatest bee-keeping country in the world, and amongst her apiaries she has a race of giants. I note, at least, a baker's dozen who will average 75,000 lb. of honey, all totting up from 60,000 to 112,000 lb. of surplus. Some have 800 colonies in one location; several bee-keepers are possessed of 1,000 to 3,000 colonies, and about 300 at least make a sole business of bee-keeping. Here is a sample deserving of emulation:—One New Yorker, 500 spring count, increased to 725, reared 600 queens, and produced 70,700 lb. surplus. Mr. Alexander, I doff my cap to you. How does it work out? 70,000 sixpences equal 35,000 shillings, equal £1,750. Would that my name were Alexander, and that I lived at Delanson, New York!—D. M. M., Banff.

NOTES ON FOUL-BROOD QUESTIONS.

[5831.] In reply to your correspondent "J. N." (5823, page 98), I may say there is no objection to using the same solution of Beta-Lysol for a second or subsequent washing—provided that it remains reasonably clean—as it will still retain its bactericidal properties. I am afraid I cannot satisfactorily explain "J. N.'s" second query. I can only offer one or two lame suggestions as to why certain stocks are cured, or apparently cured, by a good honey-flow. The truth may be very far distant from any of these suggestions:—Firstly, then, the long spell of fine weather, which accompanies a good honey-flow, may have an invigorating effect on the bees and indirectly on the brood, inducing in the latter greater powers of resistance to the bacilli of "foul brood." Secondly, again, freshly-gathered honey may possess antiseptic properties (possibly due to volatile aromatic substances) which we at present know not, and which disappear on evaporation. Thirdly, it is just possible that during a honey-flow the poison-glands take on increased activity, resulting in a large accumulation of formic acid in the honey sac. With a still further stretch of the imagination we may picture some of the nurse bees assuming the duties of physicians and injecting with their stings sufficient of their natural antiseptic-formic-acid into affected cells to kill or inhibit the growth of bacilli or spores. Lastly, the destructive action of sunlight on microbic life may also be a factor.

But my imagination is running *amok*.

Foul Brood Nomenclature.—I cannot see that any material advantage is likely to accrue from the substitution of "bee-pest" for "foul brood." The latter term has been in use for many years and is universal in English-speaking countries. Neither term has the merit of being scientific, but "foul brood" conveys more to the mind than does "bee-pest," which, at the best, is a loose term.

After all, the striking characteristic of the disease is the foulness of the brood, and this is appropriately suggested by the name "foul brood." It is true that the name does not describe all the varying phases of the disease, but the suggested substitute

does not even go so far, and merely indicates a disease which is a pest, or *the* pest. I consider one term equally correct with the other, for whilst the disease is not always characterised by foulness, and the brood is not *always* affected, neither is the disease *always* "pestilential in its virulence" (to quote Mr. Harris), though it will probably become so in course of time just as the brood will undoubtedly become affected and will probably become "foul." —T. S. Elliot.

BEE-NOTES FROM ROSS-SHIRE.

[5832.] In last week's issue of the B.B.J. Mr. Woodley makes an appeal to readers for "notes." In response I now send a few which I hope may be of interest to readers of our journal.

"*Celluloid.*"—The use of this substance in hives has recently been brought into prominence by "D. M. M., Banff," when on February 16 he referred to the extensive use of it in my apiary. Since then "A Bee-keeper, Thornhill, N.B.," on page 87, condemns it on account of its inflammability, while admitting that it has all the advantages claimed for it in Mr. Reid's letter (page 74).

I can add my testimony to what "D. M. M." states on this subject on page 94, where I consider he effectually and neatly disposes of the "inflammability" objection. For myself, I cannot understand why any one should inject fire amongst bees for the purpose of subduing them when smoke answers that purpose. It seems to me to be a murderous proceeding. A contribution from Mr. Geo. Rose, Liverpool (page 96) is on the same lines as the one from "A Bee-keeper, Thornhill, N.B.," except the closing sentence, which appeared to me as being a very nicely put and timely advertisement, but which would have looked better on another page of the Journal. Mr. Rose did not supply the names and addresses of the other appliance-dealers who stock celluloid, so I hope the gentleman referred to will have noticed the omission. Personally, I should like to get the address of a manufacturer of celluloid. The different uses to which I put this material are as follows:—A light frame covered on the inside with it makes an excellent dummy. It is easily tacked on; the bees do not blur it as they do the glass, and they seem to like it better. In the same way I use it on my section-crates with the same satisfactory results, and the honey looks very well through it. I have not had so much experience of it as a quilt, but so far I am thoroughly satisfied with it. It is certainly a great convenience, and a pleasure to be able to see at a glance the state of a hive or a crate of sections without having to tear up a glued-down quilt before you can do so, to say nothing of the disturbance to the bees, and the extra work it causes them repairing the damage.

But what has given me the greatest satisfaction is its use as a covering for a winter passage a description of which I will give in some future notes, as I have already, I am afraid, occupied too much of your space. —Alex. Reid, Ross-shire, March 13.

DEALING WITH FOUL BROOD.

BEES CURING THEMSELVES.

[5833.] With reference to the question put to Dr. Elliot by "J. N." (5828, page 98) why some infected stocks of bees seem to overcome foul brood during a good honey-flow, I will, with the Editors' permission, give my personal experiences on this question. I remember that Mr. John Berry, of Llanrwst, also referred to cases of apparent cure of foul brood during last season in the B.B.J. of November 3 (page 434), the bees having apparently cured themselves, helped only by a season that was good for honey, and therefore good for bees.

In the year 1901 I found one stock of bees in each of two different apiaries that in the autumn had apparently rid itself of foul brood since my previous examination in the spring. I made special notes of these two stocks, but one of them I had no chance to see as time went on. The other stock I was able to keep under observation, and, as it continued quite healthy during the following year, I accepted this as proof of self-cure, by the aid of a good honey-flow. However, early in the second season following the first appearance of the disease in this stock—or, to be precise, twenty-one months after the apparent cure—the disease showed itself again; and it is important to note that the only two combs in which diseased larvæ were found were two of the three original combs that were in the hive two years before, the other combs being faulty, having been replaced by new combs. The three combs originally mentioned I had marked, and it was fortunate that I examined the stock at this time, as otherwise all the brood-combs would have been infected, and my observations rendered useless.

The moral here is, that though the bees may appear to have cured themselves, we may make assurance doubly sure by removing and destroying all the combs, as it is possible for a single spore of foul brood to lie buried in a comb for years, and then come in contact with a suitable medium in which to develop, and thus be the means of infecting the apiary when least suspected.—Wm. Loveday, Hatfield Heath, Harlow.

(*Correspondence continued on page* 106.)

Obituary.

THE HON. AND REV. H. BLIGH.

Last week we received the sad news of the death of the above-named gentleman just as we were going to press, and we, therefore, now give our readers a biographical sketch with portrait of one who has been more or less connected with the British Bee-keepers' Association from its foundation.

The Hon. and Rev. H. Bligh, born in London on June 10, 1834, was the son of Edward, fifth Earl of Darnley, who died from the effects of an accident, cutting his toe with an axe while helping to fell a tree a few months after the birth of Mr. Bligh.

He was brought up at Cobham Hall, in Kent, and went to school at Hampton, Worthing, and Rugby, matriculated at Christ Church, Oxford, but was compelled to leave before his University course was completed owing to ill-health. Mr. Bligh's fondness for a country life and rural pursuits induced him to take to farming, and with this object he purchased a farm in Rotherfield, Sussex, and for five years was occupied in agricultural pursuits. In his hands farming turned out a considerable success, and in consequence of the drainage and other improvements introduced, the farm sold for more than double the original price. While occupied in farming, the cricket reputation of the family for some generations back was sustained by Mr. Bligh, who was a good wicket-keeper and steady bat. In 1858, Mr. Bligh married Emma, daughter of Colonel Armytage, and his health having improved in consequence of his leading a country life, he gave up farming, in 1861, with a view to devoting himself to the ministry of the Church. For this purpose he went to Salisbury Theological College, and took Holy Orders in 1863. After holding a curacy for three years, in 1866 he was appointed by Dr. Wilberforce, at that time Bishop of Oxford, to the living of Nettlebed, Oxfordshire, and who further promoted him to the offices of Diocesan Inspector of Schools and Rural Dean.

THE LATE HON. AND REV. H. BLIGH.

It was while at Nettlebed that Mr. Bligh first became a bee-keeper in 1870, and commenced by following the instructions of the late Mr. Pagden, but soon became a firm disciple of Mr. Abbott, and in 1874 attended the first original small gathering of seven bee-keepers from which the British Bee-keepers' Association dates its existence. In this year he was appointed by the Bishop of Oxford to the important living of Abingdon, with a population of 7,000.

Mr. Bligh took an active interest in bee-keeping, and served on the Committee of the B.B.K.A. until 1878, when his health again broke down, and he spent three years abroad for the benefit of his and Mrs. Bligh's health. He was a frequent contributor to the columns of the B.B.J., and in 1876 he showed a beautiful collection of honey in supers, sections, and extracted. The greater part of the exhibit was in glass sections, with grooved wooden corners, the invention of Mr. Abbott. There was no class open for these, but the merit of the exhibit was recognised by the Committee afterwards awarding Mr. Bligh a silver medal for it.

In 1879 Mr. Bligh so far regained his health that, in company with two friends and one guide only, he accomplished the ascent of Mont Blanc.

From 1881 to 1893 he was Vicar of Hampton Hill, and in 1881 he lost his wife. He was also re-elected on the Council of the B.B.K.A., of which he has been a member ever since, and for three years occupied the position of Vice-Chairman. In 1883 he married Annie, the daughter of the late Colonel G. Butler. Mrs. Bligh was an enthusiast in bee-keeping, and frequently accompanied her husband to the quarterly meetings. Mr. Bligh was the originator of the Economic Apiaries' Competition, known as the "Bligh Competition." The object of these competitions was to show what could be done with our modern hives and improved methods. They were started in 1882, and continued for two seasons, Mr. Bligh contributing liberally towards the prizes. In the first competition there were seventeen candidates, of whom only seven competed to the end, and the special Committee reported that this competition was most beneficial to the cause of the Association by demonstrating that, with a fair knowledge of the art, bee-keeping was a most profitable pursuit. Mr. Bligh's idea that the hive of each candidate should be placed in the garden of some cottager was a good one, for it showed the cottager what could be done by proper management, and taught him a lesson in bee-keeping he would not easily forget. At the second competition the Association awarded £21 in prizes, and it was carried out under the supervision of Mr. Bligh, who took a great deal of trouble, and devoted much time to it. This was also successful, for nine out of the thirty-three competitors who entered held on to the finish, and six secured the prizes. All recorded a large harvest, a valuable stock in hand, and a very handsome profit on the balance sheet. Each started with one swarm, and at the end of the second season one of the winners secured 140 lb. of honey and an increase of from one swarm to five well-established and well-provisioned stocks, and another 186 lb. of honey, and a very strong stock left for next season. It is a pity that owing to the difficulty in managing these competitions the Council were obliged to give them up. On the Council Mr. Bligh has been a most regular attendant, and was for some years a member of the Examining Board.

Mr. Bligh was Hon. Secretary of the Middlesex B.K.A. until he removed from Hampton Hill in 1893 to Fareham, where he was Vicar of Holy Trinity until, owing to ill-health, he retired in 1902. He was at one time a most regular attendant at the Council meetings, and took a keen interest in the business of the B.B.K.A. He attended the last meeting of the Council on February 15, and little did his colleagues think that this would be the last time they would see him amongst them. Personally, we feel keenly the loss of a sincere friend, having been for upwards of thirty years so closely connected with Mr. Bligh, and we have, with him, watched, and rejoiced at, the progress of the industry from insignificance to its present important position.

We feel sure that all bee-keepers will unite with us in sympathy for Mrs. Bligh and family in the loss which they have sustained.

CORRESPONDENCE.

(*Continued from page* 104.)

SUNDRY BEE-NOTES.

[5834.] 1. *Bee-Stings for Rheumatism.*—Some time ago I gave my opinion on the bee-sting cure in B.B.J., and shortly afterwards I had a press-cutting sent me which reads thus:—"Don Furioso is righteously indignant. 'Can you give me the name and address of the man,' he asks, 'who first invented the bee-sting cure for rheumatism? I want to make his acquaintance very badly, as soon as I am in a position to move with anything like comfort. In a weak and desperate moment I tried the cure the other day. The process was quite simple. I wandered into a neighbour's garden and removed a sack from an ancient hive. The bees did the rest. At the moment of writing I can just see through one eye, the other is still closed for repairs, and I understand my face still preserves the shapeliness of a turnip, while only by diligent exploration can I find my mouth. My rheumatism is worse than ever, and I have only one ambition in life—to find the man who invented this recipe for rheumatism.' The undertaker will do the rest."

Drinking Troughs. — These are easily made by filling a jam-bottle with water; then cover with a piece of cloth or flannel

cut rather larger than mouth of jar; set a plate on the top and invert the whole. The cloth will allow just enough water to escape as the bees require. If it does not run fast enough, pass a shaving under one side; if it runs too quick, sprinkle a few tea-leaves around it. Should the bees not take to the trough at first, slightly sweeten the water. I have never found this to cause robbing in the spring. "Slow" or "rapid" feeders may also be made in this way, if used at the back of a dummy board.

2. *Bees and Church Bells.*—A friend of mine has his hives near a church-bell tower, and when the bells are rung the bees rush out and become very irascible. They fly from the hives in their anger, and many perish if it is cold, not being able to get back to their hive. What about the banging of pots and pans to bring swarms down after this?—H. P., New Brompton, Kent, March 10.

[Further "notes" dealt with on page 110.—EDS.]

CELLULOID FOR BEE-KEEPERS.

[5835.] Referring to above, may I be allowed to say there is a company called The Fireproof Celluloid Syndicate, in Westminster, S.W., who make fireproof celluloid? I know nothing of the company myself, but was told of it by a friend. I send name and sign—EAST KENT, March 11.

HYBRIDISING AN APIARY.

[5836.] Referring to the letter of "L. A. V." (5824, page 96) and the request for the experience of bee-keepers on the question of hybridising an apiary, may I be allowed to give my experience on the four crosses mentioned by your correspondent as follows?—1. "Carniolan queen with Ligurian drone." If both queen and drone are pure bred this cross produces by far the prettiest and most energetic worker bees of which I have had any experience. I also never saw any bees defend their hive-entrance so well, for I doubt if any robber-bee or wasp ever left their hive alive if they got inside. The stock from which the queen referred to above was raised was imported in 1887, by Mr. T. B. Blow, of Welwyn, and I never saw finer Carniolan bees. 2. "Ligurian queen with Carniolan drone." This cross are very pretty bees and worked about the same as any ordinary hybrids. 3. "Carniolan queen with Black drone." I had queens raised from the first-named stock (No. 1) mated with English drones, and the resultant bees were splendid honey gatherers; not only so, but their comb-honey was exceedingly well capped and finished, so good that prizes were won with sections from this strain at Edinburgh, Glasgow, Kilmarnock, and Birkenhead. 4. "Black queen with Carniolan drone." These hybrids were about the same as No. 3 for working qualities, while the bees were lighter in colour. I was very fond of this cross.—W. W. PRYOR, Breachwood Green, Welwyn, Herts.

ON THE CARE OF BROOD-COMBS.

(*Continued from page* 98.)

[5837.] *Faulty and Drone Combs.*—There ought not to be many combs containing drone cells. This is usually considered a sign of bad management, and so it is. Drone comb, however, may be produced by lack of room, and this is the worst case, as it means the cutting down and spoliation of good worker comb, so that the safety valve of some space, or the corner of drone comb, is not without its value, in addition to its acting as an indicator of the condition or intention of the stock possessing it.

Where combs are built from starters only, it is unavoidable that at times the bees should get ahead and build some drone comb, except when they are subject to the closest attention and a thoroughly good system of comb-building. But should such combs exist, their number should certainly be reduced to not more than one per hive, and with this object they should be sorted carefully, the best alone saved entire, or such as contain worker comb principally, with either or both bottom corners only filled with the larger cells. To digress, I would say that I mark such permanent combs either by fantailing the end of the top-bar, or by a small metal clip, so that the comb may be recognised at once upon opening the hive.

The rest of the faulty combs should again be sorted. Those that are black with use, the oldest, thick with cocoons, should be cut out and thrown into rain-water prior to rendering. Lest it be thought through this advice that I am one of the advocates of the constant or easy destruction of combs, may I here enter my emphatic protest against the wicked waste of many good combs by those bee-keepers who attach undue importance to such teaching? Quite recently I have seen it advised that all combs be renewed annually.

Where a comb is diseased, or foul, or aged beyond question, it may be false economy to retain it, but I have occasionally found a novice willing to destroy a comb because of colour only, whilst where a comb is clean, and healthy, and straight, its only fault (*sic*) being that it is strengthened and toughened by the silken bonds of several seasons, it is worse than wasteful to destroy it, whatever the foundation makers may say upon the subject.

But to return. The newer combs, and all such as are worth saving and lend themselves to the treatment, should be repaired by one of several methods. Dr. C. C. Miller cuts out the bad place, drone patch, queen cell, or what not, and fills the gap with foundation. On one side of the comb the hole is made about ¼ in. larger, thus forming a rabbet upon which the piece of foundation, carefully cut to size, is made to rest, and to which it may be waxed with a little ingenuity and the use of the teaspoon, which has perhaps already been squeezed at the nose into the semblance of a spout.

Crooked or Otherwise Faulty Combs must be treated as the knowledge or ingenuity of the owner suggests. They are almost outside the present scope, and he alone can decide whether they are worth his time and trouble; but I have seen fairly good combs hastily constructed from the better parts of the brood comb of several driven skeps, and a strong lot of united bees wintered well upon them, which would not otherwise have been saved, it being very late in the season. It is very often possible to make an almost perfect comb by crowding into the damaged place a piece of comb the exact size of the hole.

Such a plug may be cut from one of the discarded combs. One good method of doing this is to use a round tin to punch out both the bad place and the repair plug. I prefer, however, usually to cut out a piece with one or more sides of hexagonal angle, the knife following a row of cells. This gives perhaps the least waste, and is a simple method of arriving at the required size, whilst the adjacent cells will be found to be, for short distances at least, fairly well aligned. Corner pieces fitted in this way make a good comb better by the sound attachment to the bottom-bar. When repairing wired combs, the wire should always first be discovered and cut with scissors at the line of repair.

Wax Moth.—The ravages of the larvæ of this pest are too well known to need description, but the remedy is not always so apparent. First catch your larva, then kill him. The larger and more perfect end of the tunnel is of course his location, and if a match-head be inserted slightly to the rear of this, he will be driven forward, and may be crushed or extracted. The silken tube may be hooked out cell by cell with a tiny tool of the crochet-hook type, and I have found that the syringing will sometimes effectively remove the traces, or at least wash the tube into a tiny fibre, which one would think might be pulled out by some more than usually energetic bee, to whom indeed the whole of the work might be left.

I prefer, for several reasons, to do the work more thoroughly. There is a series of holes through the side-walls, and I do not think that the bees are easily able to repair such holes, as their jaws are unable to work both sides of the wall as when building. I therefore cut right down to the base at once with a slightly hooked tool, and pull out the whole of the tube, leaving a narrow channel amongst the cell walls, which is, I think, not only more easily repaired, but of use to me in periodic examination of the comb, telling that the marauder has been definitely removed, so that I waste no time upon a cold trail. It is the quickest and, I believe, the most satisfactory method, though the comb does suffer in appearance. Great care should of course be taken not to damage the midrib of the comb, and such combs should be given as soon as possible to small stocks which are crowded for room, as these will at once repair the damages with the least risk of permanent pop-holes.

Thorough fumigation with sulphur will kill the larvæ, but probably not the eggs, as the moth has reappeared in some combs which were so treated, though it is just possible that access was again obtained to them. This would seem to show that the process should be carried out twice to complete the work.

Pollen Mites.—If upon examination the combs are found to be covered with a brown powder which appears to be pouring from certain cells, the beginner need not be alarmed into the belief that he is at last face to face with the much-dreaded disease. The phenomenon is caused by a mite, probably the cheese-mite, one of the many varied forms of Acarina, which is feasting upon the wads of pollen. A good rap or two will shake the combs fairly free from both feast and feaster, whilst a syringing will complete the work and leave a clean comb. The mite is, by the way, a radical cure for pollen-clog, and does not apparently do any other harm. I would rather have mites than mould.

Mouldy Combs.—If, as sometimes happens—never, of course, to you, dear careful reader—a stock dies out in winter, the combs rapidly become mouldy, and the sooner this is discovered the better. A thorough syringing will remove much of the apparent growth of the plant and the bulk of the dead bees, dislodging them even from their cell-tombs. If a comb is old and tough, it is the more likely to be mouldy, but it is better able to stand the usage than a new and brittle comb, and it may be found advantageous to syringe with a weak solution of carbolic acid, after which the combs should be thoroughly dried as before. The solution should not be strong enough to burn the fingers.

General Treatment.—The combs should be looked upon as the most valuable ac-

cessories of the bee-keeper, should receive the most and best attention at all times, and be always properly stored in moth-tight receptacles in a warm place, the only objection to the temperature of which is that the growth of the wax-moth is encouraged, and the true remedy for that evil is thorough and regular examination, in addition to the use of the usual preventives, of which by far the best is naphthaline. Keating's powder spread in the bottom of the boxes which are not insect-proof will keep away such undesirable visitors as cockroaches, and it is possible that one of the numerous sanitary powders might serve a useful purpose in this direction. It must not be forgotten, however, that these are hardly likely to be relished by the bees, and that the combs themselves should not be sprinkled.

In closing this long and possibly, like the tunnelled path of "Galleria, Grub, and Co.," somewhat rambling dissertation, may I press upon the attention of any beginner who reads this, that his combs should be looked over at once, when it is possible that he may be astonished at the "headway" made by the common enemy of both the comb and its keeper; whilst to those beginners who are willing to learn by the experience of others rather than by their own loss, I would repeat the words of my text, "Take care of your combs."—L. S. Crawshaw, Ilkley, Yorks.

FEBRUARY RAINFALL.

Brilley, Herefordshire.

Height of gauge above sea, 590 ft.
Rainfall, 1·28.
Greatest fall in 24 hours, ·30 on the 27th.
Rain fell on 14 days. W. Head.

Queries and Replies.

[3686.] *Growing the "Chapman" Honey-plant.*—I am a regular subscriber to the B.B.J., and am most interested in anything and everything connected with bees, and trust you will help me with your advice. Mr. Reid kindly sent me some "Chapman" honey-plant seed, which I sowed in fair soil, open garden, October 4, 1904. It has never come up. Then Mr. Loveday kindly sent me some, and I sowed two boxes, and put them into a forcing-frame, January 14, 1905. These have never come up, so I sowed two more boxes and a seed-pan on February 24, 1905, and put boxes into hot-bed, and these are not showing either, although all the rest of my seeds planted the same day are up and thriving. Could you tell me what to do? I planted a lot of sweet peas on October 4 (same day), and close by honeyplant, and have splendid rows showing now, so I cannot account for it. Each time I sowed the "Chapman" seed I put a different amount of soil on the top—from 1½ in. to ¼ in.—to see if that would make any difference.—I send name, etc., for reference, and sign—Potsy, Weymouth, March 10.

[We forwarded the above to Mr. W. Loveday, who kindly sends the following reply.—Eds.]

In reply to the letter of your lady correspondent who signs "Potsy," I may say that if the seeds sown in October were heavily covered with soil they would rot, while a lighter covering would preserve many of the seeds till spring. Had the seeds germinated at so late a date the severe weather of November would have killed the seedling plants. Some seedlings grown from seeds sown here in October are just now appearing above the surface of the ground. The "Chapman" honey-plant is perfectly hardy, and to coddle it in a hot-bed and a forcing-pit would be to kill it by kindness.—W. L.

[3687.] *Bees Found Dead in March.*—On opening one of my hives last week I found the whole colony of bees dead, and am sending a piece of comb from same for inspection. I should very much like to be enlightened on a few points: 1. Whether the comb is diseased and unfit to use again, as I have five combs having the same appearance as sample. There was no honey in the cells; but I had been continually feeding the bees. 2. The last lot of candy I made was from "Barbadoes pure cane sugar" (so I was told by my grocer), a sample of which is enclosed, and I have very carefully followed the directions given in "The Irish Bee Guide"; but the bees hardly seemed to take to the candy so made, nor do the stocks. I am now feeding with it, so I am in a maze as to the cause of the death of the colony mentioned, and whether I am using the correct sugar. I also send a sample of refined white crystal sugar I thought of using, and should like your opinion as to which is the best for candy-making. Thanking you in anticipation, I send name, etc., for reference, and sign—A. W. F., Netley, March 8.

Reply.—1. There is no sign of disease in comb sent; it has evidently been only bred in once, and as cells are perfectly dry, with no trace of food, it denotes death from starvation. 2. The sample received is no doubt "pure cane," as stated by your grocer; but being raw, unrefined "Barbadoes," it is utterly unfit for use in making candy for bee-food, and we are not surprised

at its being refused by the bees. Your second sample is quite suitable for candy-making if pure cane sugar.

[3688.] *Dangers of Transferring.*—1. Will you kindly report on the sample of comb herewith? It was new last year, and is taken from a hive of twelve frames set under a straw skep of a previous year's swarm inadvertently put into an old—and, I expect, disease-infected—skep obtained from a neighbour. The six outside frames were quite free from suspicious appearances. I have now placed four of these outside empty combs in the centre of the hive for the queen to begin laying in, pushing these "bad" frames to the outside after cutting out all their centres, leaving the old honey in them for their present food supply. 2. I was surprised to see so much newly-gathered honey of this year—some of the cells were nearly half-full. I noticed honey in another hive more than a fortnight ago. Is it not unusual for bees to gather honey so early? Surely there can be no need for artificial feeding.—J. P., Cornwall, March 7.

REPLY.—1. We regret to say comb is affected with foul brood. Your case clearly proves the danger of using skeps without knowing they are free from infection. The stock being now diseased, it must be treated as such by removing all combs seen to be diseased, and constantly watching the hatching-brood, while taking all known precautions by use of disinfectants and medicated food. 2. There is nothing unusual in seeing freshly-gathered honey in hives during March.

[3689.] *Bees Deserting Hive.*—I enclose a piece of comb, and wish to know if there is any trace of foul brood in it. The bees deserted the hive from which comb was taken in November, 1904, and I think the colony was being robbed at the time, and probably the bees went off and joined the robbers. The owner of the hive asked my advice, but I was not quite sure on the point, though some of the indications are suspicious. I think myself there is only a slight trace of disease, if any. I have been a subscriber to your journal for the past three or four years through our local bookstall.—R. H. H., Newbliss, Ireland, March 2.

REPLY.—There are unmistakable signs of foul brood in comb, such as would make it plainly apparent to anyone accustomed to diagnose the disease.

Notices to Correspondents & Inquirers.

*** We are much obliged to several correspondents who have written in corroboration of what was said by Mr. W. H. Harris, on page 94, regarding the "black currant mite" (*Phytoptus ribis*). Several bunches of twigs have since been forwarded, with the swollen buds developed much more than those we saw, and knowing more about bees than we do about currant buds, we were possibly deceived. We hope, therefore, that all who are troubled with the pest will write for "Leaflet No. 1," which will be sent free of charge and post free on application to the Secretary, Board of Agriculture and Fisheries, Whitehall-place, London, S.W. Applicants can have several copies of leaflet if required.

H. P. (New Brompton).—Sundry Bee-Notes. —1. If ants enter hives in considerable numbers it is generally understood that the bees' food is carried off by them. We never heard it suggested that they were in search of eggs of the wax-moth. 2. We cannot think that washing with carbolic soap, and allowing the soap to dry on the skin, will prevent the "bites" of mosquitoes and "harvest bugs" in all persons, even if effective with yourself, as stated. It may, however, be tried as a preventive. 3. The art of "mounting objects for the microscope" was fully described in our pages several years ago, and occupied several issues of the B.B.J. The process is, however, beyond the powers of anyone not skilled in the use of a microscope. 4. Write Mr. Wells on the matter you refer to.

Honey Samples.

A. T. K. (Birmingham).—The section of comb-honey reached us smashed to a pulp, and the liquid-honey emptied into cardboard box in which it was packed. We need hardly say the "contents" were not pleasant, when everything — including letter—had to be washed before handling editorially. The honey is quite unfit for table use, being largely mixed with honey-dew; it can, however, be utilised as food for the bees in spring or summer.

BEE (Co. Down).—We cannot understand any one possessing the smallest knowledge of honey disparaging your sample. The quality is very good indeed in all respects.

G. H. (Basingstoke).—If you will kindly tell us where your samples were got from, we will be very pleased to give our opinion on its quality, but no one can tell whether it is "English or Scotch."

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING.

The annual general meeting of members was held on Thursday, March 16, at 105, Jermyn Street, S.W., Mr. T. W. Cowan occupying the chair. Among those present were Miss Gayton, Miss La Mothe, Mrs. E. E. Ford, General Sir Stanley Edwardes, Colonel Walker, Messrs. T. Bevan, W. Broughton Carr, Geo. Dow, W. Vivian Hatch, Jas. Howland, H. Jonas, W. P. Meadows, J. C. Mason, A. G. Pugh, W. F. Reid, A. Schofield, A. Sharp, F. W. L. Sladen, W. Sole, E. Walker, J. Willard, T. I. Weston, F. B. White, W. Woodley, and the Secretary. Apologies for enforced absence were received from Rev. W. E. Burkitt, Messrs. W. H. Harris, E. D. Till, D. W. Bishop-Ackerman, J. Brown, R. Godson, and J. P. Phillips.

The minutes of the previous meeting were read and confirmed.

The Chairman, in moving the adoption of the report and balance-sheet issued for the year 1904, pointed out that the financial position of the Society remained about the same as twelve months ago. The report showed the useful work that had been accomplished in various parts of the kingdom by the holding of examinations of students of apiculture. As usual, the support of exhibitions was one of the chief items of expenditure. It would be noted that several alterations had been made in the arrangement for the coming Royal Show, which it was hoped would be appreciated. At the request of the delegates attending the Conference in October, the Committee then appointed had formulated a Bill for the better prevention of bee-pest, or foul brood, which had been circulated in the counties with the object of ascertaining the measure of support that would be given to the proposals contained in the Bill. At the present time replies had been received showing sixteen County Affiliated Associations approving of legislation, five were opposed to the Bill, and eight were yet undecided. The number of private bee-keepers who had written in favour of the measure were in excess of those opposed to legislation, although the latter were owners of a larger average number of stocks, as they were also of a much larger total number. Four County Councils only had as yet petitioned in favour of the Bill. The Committee were, therefore, awaiting further information, and would continue the work of endeavouring to ascertain more definitely the amount of support that would be forthcoming.

Mr. Cowan then referred with some feeling to the losses the Association had sustained by the death during the year of three prominent supporters—viz., Mr. S. J. Baldwin, of Bromley, the first expert of the Society; Mr. J. H. Howard, of Holme, the well-known and highly esteemed bee-appliance manufacturer; and quite recently by the passing away of the Hon. and Rev. Henry Bligh, one of the founders of the B.B.K.A., and its first chairman in the year 1874. He was quite sure those present would join him in deeply deploring these losses, and would condole with the surviving friends and relatives.

Mr. W. F. Reid seconded the adoption of the report, which was carried unanimously.

On the motion of Mr. A. Sharp, seconded by Mr. J. Howland, a vote of thanks was accorded to the retiring Council and officers.

Mr. Bevan moved, and Mr. Meadows seconded, a motion: "That the thanks of the Society be accorded to the Royal Society for the Prevention of Cruelty to Animals for the gratuitous use of the Board-room for Committee and other meetings." This resolution was carried unanimously.

A letter from the President—the Baroness Burdett-Coutts—was handed to the Chairman and read to the meeting; as follows:—

1, Stratton Street, W.,
March 16, 1905.

DEAR MR. COWAN,—I had hoped to attend the Bee Association at their annual meeting to-day. The morning was fine, but it is now overcast, and seems likely to remain so, I am, therefore, afraid to venture out. I do not quite give up the hope of attending, but, if I do come, it must be towards the end of meeting. Should I not be able to attend, please accept my regrets, and express the same to the whole of the members.

When disengaged and in London, I shall hope you will call upon me, and we can then discuss matters more fully. I now bid you farewell with the same feeling of interest as in past years with your proceedings and prosperity.—Believe me, yours sincerely,

(Signed) BURDETT-COUTTS.

Colonel Walker moved the re-election of the Baroness Burdett-Coutts as President for 1905, and the re-election of the Vice-Presidents, hon. members, and corresponding members, treasurer, auditor, and analyst, in accordance with the rules. This was seconded by Mr. T. I. Weston, and carried unanimously.

On the motion of Mr. F. B. White, seconded by Mr. W. Woodley, the following were elected as members of the Council for the year—viz., Mr. T. W. Cowan, Mr. D. W. Bishop-Ackerman, Mr. R. T. Andrews, Mr. T. Bevan, Mr. W. Broughton Carr, General Sir Stanley Edwardes,

Dr. T. S. Elliot, Major Fair, Miss M. L. Gayton, Mr. W. H. Harris, Mr. H. Jonas, Mr. G. H. Morrell, M.P., Mr. W. F. Reid, Mr. A. G. Pugh, Mr. J. B. Lamb, Mr. P. Scattergood, Mr. W. J. Sheppard, Mr. E. D. Till, Lieut.-Colonel Walker, Mr. E. Walker, and Mr. T. I. Weston.

Mr. Woodley then stated that he desired to move a resolution on the question of bee-pest legislation, and the efforts being made to secure the passing of a Bill. There was some discussion as to whether this was allowable, the Chairman eventually ruling that inasmuch as the Legislative Committee was a distinct body appointed by representatives of County Associations, it was not competent for the meeting to move any resolution affecting their work, seeing that the Committee had not yet presented their report to those by whom they were elected. At the same time, it was within the right of members of the Association in general meeting to give special instructions to their Council upon this or other matters.

Mr. Woodley then proposed his resolution—viz.: "That the Council be thanked for the efforts they have made to introduce legislation for the diminution of foul brood; but that, in view of the hopeless disagreement among bee-keepers as to the possibility of legislation on the subject, the Council be requested to cease from further attempts to obtain such legislation." The resolution was seconded by Mr. A. Sharp.

Colonel Walker thought the Committee should be allowed to continue its work, and endeavour to arrive at some definite conclusion with regard to the feeling in the country on the subject.

Mr. Reid and Mr. F. B. White spoke in favour of Mr. Woodley's motion, and contended that the Bill as at present drafted would be productive of harm rather than good.

Mr. Meadows, Mr. W. Broughton Carr, and General Edwardes strongly advocated waiting until such time as the Committee had arrived at definite conclusions, and were in a position to formulate their report upon the subject for which they were instituted.

Mr. Crawshaw thought notice of such a motion as Mr. Woodley's should have been given beforehand and printed on the notice-paper. He was in favour of the Committee continuing its work as already suggested.

General Edwardes then moved as an amendment: "That the Council be thanked for the efforts they have made to introduce legislation for the diminution of foul brood." Mr. Carr seconded the amendment, which was carried by nineteen votes for, and six against.

The meeting then terminated.

A meeting of the new Council was held immediately following the general meeting, when Mr. T. W. Cowan was unanimously elected Chairman for the ensuing year, and Mr. T. I. Weston, Vice-Chairman.

It was resolved to hold an examination for first-class expert certificates in London in the first week in May.

Nominations of gentlemen to officiate as judges at the coming "Royal" Show were made, and it was also decided to offer medals and certificates for competition at the Grocers' Exhibition as last year.

The next meeting of the Council will be held on Wednesday, April 19.

The company reassembled for the usual *conversazione* at six o'clock, after partaking of the light refreshments provided, and Mr. T. W. Cowan unanimously voted to the chair. The subsequent proceedings will be reported in our next issue.

LINCOLNSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Lincolnshire Bee-keepers' Association was held at Grimsby on Saturday, March 18. In the unavoidable absence of the President, Lord Heneage, the chair was taken by the Mayor of Grimsby, Councillor J. Hewson. There was a large attendance of members.

The annual report, presented by Mr. R. Godson, hon. secretary, stated that the membership had again increased, there being now 640 members. The receipts, members' subscriptions, etc., including a balance of £19 19s. 3d. from the previous year, amounted to £206 9s. 1d., and the total expenditure to £195 2s. 2d., leaving a balance of £11 6s. 11d. Grants amounting to £8 9s. had been made to fifteen local shows. The main work of the Association—viz., the expert tours in spring and autumn—had been carried out by members of the Association. The Committee regretted to have to again call attention to the increase of bee-pest, or foul brood, many districts being affected, especially in the south-east and north-west of the county. The Committee felt certain that until there is legislation for the better prevention of this bee-pest it cannot be either checked or exterminted. Mr. F. W. Gelder, of Sturton-by-Stow, and Mr. H. Linley, of Market Rasen, had secured third-class expert certificates. The Lindsey County Council had again voted £15 for lectures, and these had been given. A district had been formed at Grantham, and new extractors had been sent to Grimsby, Stickney, and Grantham.

The Mayor formally moved the adoption of the report.

Councillor Riggall, Grimsby, seconded, saying that the ever-increasing membership showed that the Association had been worked in the interests of the members.

The officials and members of the Committee were unanimously re-elected, and heartily thanked for their services. The hon. secretary responded.

It was unanimously resolved to admit as members bonâ-fide labourers owning not more than two hives of bees at the reduced subscription of 1s. per annum.

His Worship the Mayor presented prizes won during the year. The silver medal for the best trophy at the Lincolnshire Agricultural Show: Mr. W. Patchett, Cabourn. Bronze medal: Mr. W. Hatliffe, Thoresway. Silver medal for extracted honey: Mr. T. S. Holdsworth, Kirton Lindsey. Silver medal for sections: Mr. A. W. Weatherhogg, Willoughton.

Mr. F. J. Cribb, Retford, spoke at some length on the bee-pest visitation. The Committee of the Association had, he said, prevailed upon the Lindsey and the Kesteven County Councils to pass resolutions in support of the Foul Brood Bill to be introduced into Parliament, and he hoped that the Holland County Council would do the same. It was not the members so much as the non-members who were responsible for this pest. The latter refused to let anyone see their bees or to sell them so that they could be destroyed. What was wanted was the power to inspect these bee-hives, and, working in a way similar to the Swine Fever regulations, they would be soon able to exterminate the pest.

After discussion a resolution was unanimously passed supporting the Bill.

Then followed a drawing for bee-appliances, a lantern-lecture on bee-keeping by Mr. F. J. Cribb, and a vote of thanks to the Mayor for presiding.

NORTH NORFOLK B.K.A.

ANNUAL MEETING.

The annual meeting of the North Norfolk Bee-keepers' Association was held at Holt on Friday, March 10. The following officers were elected:—President, Lady Hastings; Vice-Presidents, Lord Justice Cozens-Hardy, Sir W. B. Gurdon, M.P., and Mr. F. T. S. Rippingall; Treasurer, Rev. C. O. Knowles; Secretary, Mr. C. J. Cooke; Committee, the Revs. E. Russell and T. E. Platten, and Messrs. W. Towler, H. Bond, H. Woolsey, E. Mann, C. Clarke, J. C. Platten, and A. Webster. The experts (Messrs. C. J. Cooke and J. C. Platten) were re-elected The annual report stated:—"The eleventh year of our Association is now completed, and, on the whole, especially financially, it was the most successful we have experienced. The summer of 1904 will be long remembered for the extremely warm weather experienced, which made outdoor life and occupations very enjoyable. To this may be largely attributed our increase in membership, the addition of twenty-three to our ranks being the highest on record. After all, one of our highest aims is to encourage the cultivation of elevating hobbies, and such summers as that of 1904 are the most calculated to achieve this object. Of course, in considering any scheme of popularising bee-culture it is well to remember that our County Council does not mete out much generosity to us. Yet it is to be feared that, with the increased demands upon its resources, the Education Sub-Committee of the C.C. is scarcely likely to add anything to the small annual grant which we have hitherto enjoyed. Therefore, we must continue to rely upon the efforts of our own members in extending the usefulness of our Association."—*(Communicated.)*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5838.] The month of March — up till Friday, 17th—sustained its reputation for storms and blustering winds; then came a most pleasant change for the better, and now (20th) spring-time has been ushered in with glorious sunshine. The bees have, in consequence, been on the wing in thousands visiting every floweret in bloom. The crocus, white arabis, and early blossom of the wall-flowers and carnations were one merry hum, as were also the skeps which contained a supply of artificial pollen. Watering troughs, too, were alive with bees—showing the work of the season is in full swing. This also raises another important question, viz., What of the food in the brood-nests? Is there still an ample supply? If not, feed at once with syrup of good consistency inside the hives; or, if your apiary stands alone, as mine does, thin syrup may be given in the open, putting the food in shallow vessels, such as platters or tins, in

which straws cut into lengths are placed to prevent drowning. A little naphthol beta may be added to the syrup. This will help to keep the bees healthy, and, with sunny weather, will make them vigorous.

If new combs are wished for or required for the growth of the brood-nest always give full sheets to old stocks, otherwise too much drone-comb will be built.

Our American cousins are adopting a novel mode of putting up granulated honey in paper cartons for the grocery stores, similar in style to our packages of butter. The large blocks of honey when turned out of the square tin is cut up with wire into blocks, ready for wrapping, similar to our provision merchants' butter and cheese cutters. The squares are then wrapped in two papers, and the very ornamental outer-case makes a very pleasing and presentable package. This will tend to bring honey in the old-fashioned crystalised form again before a large section of the American public, and I see no reason why we in this country should not adopt a similar style of package, and thus educate the public in the use of larger quantities of such a wholesome food as honey. — W. Woodley, Beedon, Newbury.

CELLULOID FOR BEE-KEEPERS.

[5839.] I notice in B.B.J., some of your correspondents condemn the use of "celluloid" about the hives on account of its inflammability. That it is inflammable I quite agree, having put it to the test; but in the hands of a careful bee-keeper there can be little or no objection to its use. I have had it on my hives as quilts or coverings to frames for three or four years, and like it very much, while the ordinary care that should be used for manipulating is all that is required when using celluloid. For myself, I always find a few gentle puffs sufficient to subdue the bees. With a clean smoker and proper fuel there is not much danger in blowing fire into the hive, if carefully used. I contend the bee-keeper should be as gentle in handling his bees as the wife is in handling her best china. I have to-day (Saturday) made a slight exam. of all my hives and find them well supplied with food and carrying in pollen freely.—Wm. Briggs, March 18.

[5840.] Referring to the letter of Mr. Alex. Reid (Ross-shire), of course what he says on page 104 is quite right, but a note of warning as to use of celluloid is not offered to the careful man, it is the *sinner* only who needs repentance. We appliance dealers know only too many vigorous, careless bee-keepers who occasionally get smokers red hot, and bring them in to us with the solder all run together and impossible to get nozzle off to recharge.—Geo. Rose, Liverpool, March 20.

BEE-NOTES FROM DERBYSHIRE.

[5841.] The weather having been fine and warm in this part of the country during the last few days, my bees have been very busy working on the crocuses, etc., and bringing in large quantites of pollen, which indicates that breeding is going on. On Saturday last I took the opportunity of examining my four hives to ascertain the state of food supply, and was very pleased to find they were well provided for, all of them having several frames of sealed food left. The strongest stock was one formed by uniting two lots of "driven" bees at the end of August, and hived on eight drawn-out combs. This lot were bringing in pollen very freely. I think a good method of clearing out sections and combs in which the honey has granulated is to have the back dummy made with a bee-space at bottom, and if, after bruising the cappings, the sections or combs are placed behind, the bees will soon clear same out ready for use again, and at the same time provide themselves with food.

I take a great interest in my bees, and never tire of watching them at work, bringing in pollen, etc. I think if a few flowers are grown specially for them, the pleasure is still greater. Amateur gardening and bee-keeping seem to go very well together. However much we may admire our little workers, we cannot help but adore their Creator who has endowed them with such instinct and talent. In conclusion, let me say I greatly enjoy reading the B.B.J. and always look forward to its appearance.—W. Henson, March 20.

(*Correspondence continued on page* 116.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Tew, a portion of whose apiary is seen on opposite page, sends us the following notes of his bee-experiences to go along with the interesting photo in print. He says:—

"I have been a lover of bees all my life, and my one aim with regard to them is to become a bee-master in its best sense. On starting a little apiary of my own, I was very soon smitten with the bee-fever, for my first two stocks in frame-hives did so well the first year, that after paying all expenses I was able to buy a wringing machine for my wife from the profits. The next season I started with six stocks, and my best 'take' of surplus from one hive was 97 1-lb. sections and

17 lb. of extracted honey. The quality, also, was so good that I decided to try my luck on the show-bench at our local honey exhibition, and so entered in three classes. You may judge how surprised I was on getting two first prizes and one second with my three entries. As my apiary is only a small one, I do not have big harvests; the most honey I have taken in one season is something over 3 cwt., all of which I had sold out by the following spring at a good price. I am very particular in putting my honey up for marketing, always taking care to have the sections and jars perfectly clean, and have extended my sales so far that small lots have gone to Canada, Germany, and Scotland. I also supply everything for use in the apiary, and this gets me in touch with a lot of bee-keepers, to whom I am always ready to give advice and lend a helping hand when needed. Last season I saved four stocks in skeps from the sulphur-pit, and got the bees for driving them.

"I now have twelve stocks in all; six of them are in my garden at the top of our High Street, the other six are as you see them in photo with myself and my six-year-old son in the act of subduing bees.

MR. A. C. TEW'S APIARY, MALDON, ESSEX.

He is also a bee-man in his own right as the owner of two stocks, and is very kind to his bees. If he finds one on the ground that has been blown down by the wind, he lets it crawl on his hand, where it remains till the warmth enables it to fly away home. After being stung a lot of times he is not a bit afraid of the bees; in fact, he is nearly always with me when I am manipulating.

"The small hive on the left of photo is stocked with bees that were doomed to the sulphur-pit, but I was just in time to save them by giving the owner some honey for the stock. After keeping the skep for a little while, I drove the bees and put them in an observatory hive, which was exhibited on my stand at our autumn show, and they were very attractive and much admired. I have gained all my knowledge of bee-keeping by studying the 'Guide Book' and your journals, helped, of course, also, with the practical experience which is needed by all bee-keepers.

"In conclusion, I offer a word of advice to young beginners, and it is this:—Do not expect the bees to do anything satisfactory for you unless you do something for the bees, and if you take proper care of them they will repay you for the trouble and give pleasure also."

CORRESPONDENCE.

(*Continued from page* 114.)

ANALYSIS OF HONEY.

[5842.] I thought your readers might be interested in the enclosed report of the analysis of our "St. George's" honey and its comparison with a Bedfordshire sample of sainfoin honey. I may say our bees were out flying well from June to September. They were only fed once during the first week they were out. They filled and capped five 1 lb. sections, and partially filled another two in the first three weeks of July. They had previously stored a considerable amount of honey in the frames.

I have a photograph of the sections. If you would care to have it I will send it on.

K. M. HALL, Curator.
Stepney Borough Museum.

Report of the Analysis of the Honey made by the Council's Bees in St. George's Recreation Ground, Cable Street, E., together with a Sample from Bedfordshire for Comparison.

February 9.—I have recently been able to complete the analysis of the samples of honey you were kind enough to send me. The composition was as follows:—

	St. George's. Per cent.	Beds. Per cent.
Water	19.1	20.4
Mineral matter	0.2	0.03
Glucose	66.6	71.83
Sucrose (cane sugar)	3.8	traces.

The dextrin which constitutes chiefly the remainder was not estimated.

This is very interesting from the fact that all the literature on the subject to which I have referred states that bees have the power of inverting cane sugar into glucose, and the honey from bees fed on cane sugar rarely contains more than a trace of that substance.

As the "St. George's" honey contains as much as 3.8 per cent. of cane sugar, it appears probable that the bees fed largely or entirely on that. The most striking difference between the samples of clarified honey was that whereas the Bedfordshire sample set solid in a few days, the "St. George's" sample took four or five weeks, and is even now in a semi-liquid condition. A few pollen grains were detected under the microscope, showing that some, at least, of the honey had been gathered from natural sources.

I shall hope to be favoured again next winter if these bee-feeding experiments are continued.—Yours faithfully,

ALBERT E. PARKES, F.I.C.,
Deputy Public Analyst.
Metropolitan Borough of Stepney.

[We have always contended that when bees were fed with sugar syrup there was not a complete inversion of the cane sugar as there is when they collect nectar, and we are pleased to have this corroboration of our views. This will also be found in Mr. Cowan's paper on "The Chemistry of Honey" read at American Convention in the year 1900, which will be found in B.B.J. of December 13 and 20, vol. 28. On page 495 of that volume Mr Cowan says:—"When bees have been fed with cane-sugar syrup, only part of this is transformed into dextrose and livulose, so that it is easy to detect the presence of cane-sugar in the way I have pointed out before, when this method of fraud has been adopted."

We have repeatedly and persistently opposed the fraudulent practice of feeding bees on syrup for the purpose of producing so-called "honey." The above St. George's sample we should put down as adulterated honey. We do not mean that it has been intentionally sophisticated; but the bees have received more syrup than they could consume, and it has consequently been stored in the combs and mixed with the honey.—EDS. B.B.J.]

OWNER'S RISK RATES.

[5843.] Referring to the letter of "Lilac" (5827, page 98) in B.B.J. of March 9, I, also, am a railway man of eighteen years' standing, and have known many claims to be paid on goods damaged when sent at the owner's risk rate, and an owner's risk note is held. May I, therefore, be allowed to point out that where the claimant can show wilful neglect, or rough, careless handling on the part of the company's officials, the "owner's risk" conditions are

absolutely useless? I once sent three shallow-frames of comb-honey to the Crystal Palace Show at owner's risk, but my exhibit never reached the show-bench owing to its damaged condition. I claimed 30s. for damage, and the company actually paid me 21s., so my friend "Lilac" is wide of the mark when he says it would be remarkable if anyone did obtain payment of a claim when an owner's risk note has been signed. I may also say that if you are fortunate enough to live at a place where there are two or more railway companies, and you sign forty owner's risk notes, and through the non-payment of a claim, divert your traffic to another company, your claim will be paid, and the owner's risk note repudiated altogether. Take a rich firm, for instance, rather than lose their business, a railway company will pay anything, but in the case of a poor man, who only has a consignment occasionally, he may have a very serious breakage, but the railway company will decline all liability in his case. The whole question wants serious thought, and I hope our Council will see their way to get the rate for honey question put on a proper footing. I send name for reference, and sign — WHITE CLOVER, Norwich, March 14.

REVIEWS OF FOREIGN JOURNALS

By "Nemo."

Bee-pest and Eucalyptus. — M. Louis Chevalier gives the results of seven years' experience of bee-pest in the *Bulletin de la Société Romande d'Apiculture.* He says oil of eucalyptus requires great care in using as a disinfectant in a hive, owing to its powerful expansion. In fact, with a high temperature, a strong colony, and the entrance too small, a few extra drops will in less than ten minutes kill thousands of bees. Many will rush out of the hive, fall to the ground and die, becoming as black as coal.

To avoid the danger alluded to he has a sheet of iron, 16 by 14 inches, which he covers with four or five grammes of essence of eucalyptus; on this he places a similar-sized sheet of metal with one-twelfth (1-12) of an inch perforations over a surface of about ten inches square. The two together are slid into the hive under the frames and withdrawn and smeared over with the eucalyptus twice a week during the time of brood rearing. In this way he was master of the disease. Another method was to place a piece of sacking on the frames and invert the metal plates, and in this way the fumes of eucalyptus were drawn through the hive during ventilation. This is not so effective a plan, but is much more simple, as the bees were not constantly disturbed. The smearing of the plate had to be done more frequently, as a portion of the eucalyptus evaporated into the roof, and was wasted. In this way he cured all his hives, but had constantly to wage war against infection by robbing which is so difficult to control.

He says that when once bee-pest has contaminated an apiary, it is like gout, an evil that one must get accustomed to live with. One must not be astonished after wintering perfectly healthy colonies, to find the reappearance of foul-brood in the spring. This is due to spores that have escaped sterilisation, which develop as soon as they get into favourable surroundings. It is under these conditions that eucalyptus is most useful.

M. Chevalier also states that when in manipulating he finds his bees aggressive, he puts a little eucalyptus on his hands and thus avoids being stung.

Black Bees.—M. A. Wathelet, speaking of small black shiny bees in a hive, says in *Le Rucher Belge* that they are frequently found towards the end of summer, and are workers worn out by hard work, and soon disappear from a hive. In all colonies, moreover, there are imperfect individuals; sometimes they are dwarf workers, and sometimes miserable creatures with only stumps of wings, etc. He further recommends that one should keep to the native black race of the country; although foreign bees have some good qualities, they also have bad points. By selection and judicious crossing the good qualities of the common race can be increased, and it is for this purpose that bees from the south have been introduced.

Second Swarms.—In the *Schweitzerische Bienenzeitung* M. Goldi relates a curious incident which occurred in his apiary with a cast which had settled quietly on the branch of a tree, when after a very short time the bees commenced to get excited and disappeared high up into the air. Half an hour later they came down, and the cast again settled in exactly the same place and was successfully hived. M. Goldi attributes this escapade to the queen, who took advantage of being out of the hive for her marriage flight.

A similar instance is mentioned in the same journal where the bee-keeper had hived his cast and taken it to the cellar to allow the bees to settle down comfortably and to rid itself of superfluous queens. An hour later the bees were very uneasy and showed signs of being queenless. The cast was taken back to the garden, when all the bees rushed out and flew backwards and forwards and finally settled in an empty skep that had been used in the morning. They now remained quiet, showing that they had a queen. It is probable that the young queen had left the hive for her marriage flight when the bee-keeper took the cast

into the cellar, and not finding her hive, settled with the few bees that accompanied her in the skep, which somewhat resembled her own hive.

Excise Inquiry respecting the Manufacture of Mead.—We read in *L'Abeille de l'Aisne* that the Minister of Finance of France has ordered an inquiry to be made by the excise officers respecting what use is made of honey and wax. Here are the questions asked:

1. What is done in the Department of Aisne with the residues and water used for washing out honey and wax, and also of honey of inferior quality not examined in the ordinary manner?
2. In the event of their being used for making hydromel (mead), is this drink used in its natural state or distilled?
3. What process is employed for making hydromel?
4. What is the alcoholic strength of hydromel?
5. What average quantity is made yearly?
6. Is it all consumed in the country or exported?
7. What is the wholesale price of hydromel and of the substances used in ts manufacture?
8. Does hydromel constitute a table drink, replacing wine, cider, or beer?

Or, is it only a fancy drink and incidentally used?

The editor, M. Noblecourt, replies that in the Department of Aisne all bee-keepers make a small quantity of hydromel and use the water in which the wax cappings are washed for this purpose, as well as inferior quality of honey. It is not made on a large scale, as the materials are too costly, and what is made is used at home, very little is sold, and it can only be looked upon as a fancy article occasionally used. It is impossible to make brandy with honey, as it would be too costly. It requires 2 to 3 kilos (4¼ to 6½ lb.) to obtain one litre (1¾ pints) of alcohol.

Bees Refusing Comb Foundation. — A curious instance of bees refusing comb foundation is mentioned in *L'Apiculteur*. M. Gallet, amongst other interesting articles, showed a frame that he had fitted with a sheet of foundation, one half of which was made with vegetable wax and the other half with mineral wax. The bees built on the vegetable wax and stopped their work on the other. This lesson will not be lost on adulterators, but the collapse of combs will be the more certain, as their weight and the softness of the wax will militate against them.

Development of Bees' Eggs.—We find in the *Journal of the Royal Microscopical Society* a summary of the researches which were given in *Zeitschrift fur Wissenschaftlicher Zoologie*, by Otto Dickel, who has studied the formation of the blastoderm, the origin of the yolk-cells, the history of the yolk-cells with especial reference to the blastopon re the formation of the endoderm and mesoderm. No distinction can be drawn between yolk-cells and the endoderm established by invagination. Both are derived from the same material. The endoderm of insects may be formed by yolk-cells or by invaginated material, or by both. The distribution of yolk-cells and invaginated material may be such that in the earlier stages the yolk-cells form the endoderm of the median region, and the invaginated material forms the polar regions. Between endoderm and mesoderm there are the closest relations, for both arise in intimate interdependence.

Tartaric Acid in the Hive.—Herr Reidenbach, the editor of *Pfälzer Bienenzucht*, has been carrying on experiments with the object of determining the acids that are found in a hive. He has discovered that brood-combs always contain an acid which new combs do not. He found this by pouring water into the cells, which very soon showed an acid reaction. If blue litmus tincture be poured into old combs it turns red in twenty-four hours. This acid was subsequently found to be tartaric acid. Hitherto it was thought that only formic acid was found in connection with bees. As new combs contained no acid, it was surmised that it was derived either from the brood-food or the cast-off larval skins. The former was ascertained to be the case, as on analysis it was found that brood-food contained as much as 3.9 per cent. of tartaric acid, but no formic acid. The acid is produced by the salivary glands, and by means of these gets into brood-food.

Wasps and Foul Brood. — Some bee-keepers have thought that wasps were subject to foul brood, and have argued that there was little hope of getting rid of the pest so long as wasps' nests were allowed to harbour it. M. Lichtenthaler relates, in the *Rheinische Bienenzeitung*, that during the past year he received two wasps' nests which really appeared to have the disease. There was the characteristic odour, rotten brood, and all the other signs of foul brood. He sent these two nests to the Biological Institute at Berlin, where the foul-brood question had been thoroughly studied. After careful examination it is stated that there was no foul brood in the two wasps' nests; the microscopical examination and the cultures did not show the presence of the disease germs, either in the bacillus or spore condition. This will dispose of the idea that wasps can infect hives or that they are subject to the disease.

Bees Staying Out All Night.—It is stated in *Die Biene und ihre Zucht* that it frequently happens that in their eagerness to gather, bees are overtaken by night, or are

surprised by an unexpected downpour of rain. In such a case they take shelter under a leaf and pass the night half-chilled. Sometimes several gather together and form a small cluster, mutually warming themselves. As soon as the sun rises, they gradually recover by the warmth of the rays, and return to the hive. It is not difficult to verify this fact, as one has only to close the entrance to the hive when work for the day has ended, and on visiting the hive early the next morning, one would be astonished to see the number of bees returning to their hive after having spent the night out-of-doors.

Echoes from the Hives.

Romford, Essex, March 13. — In bright sunshine, with a warm southerly breeze, and shade temperature of 57, the bees have to-day, for the first time since February 17, been out in large numbers for a cleansing flight. Bees seemed busy carrying in water, but very little pollen seems available yet. All my stocks seem to have wintered well, and have ample stores for another month's supply.

To the timid—or at least to those who object to being stung—(and I plead guilty on both counts!) I offer, gratis, a suggestion in the way of gloves. I find my plan works well in practice, and entails very little loss of confidence. I use an old pair of ordinary lined calf winter gloves, and from the thumbs and forefingers I cut away as much as leaves the latter free to the first joint. This gives all the necessary freedom in manipulating, and is altogether a comfortable arrangement. The idea may not be original—I shan't patent it!—R. J. T.

Queries and Replies.

[3690.] *Keeping Bees in Suburban Gardens.*—Will you kindly advise me as to the following?—I have a small back garden, about 70 ft. long by 18 ft. wide, with two large pear trees and sundry bush-fruit growing therein. Of late years, however, we do not get such good crops of fruit as before, so I thought that keeping a colony of bees might help matters considerably. I therefore ask: 1. Could they be kept in such a small place with advantage? 2. As it would be essential that no swarming should take place, what apparatus would you suggest to ensure this? The surrounding gardens also contain fruit trees, besides which I am only a few minutes' walk from Tooting Common, and there are also two railway banks near on which bees might get some food. I may add a line to say I have no experience whatever of either bees or appliances. I send name, etc., and sign —INQUIRER, Balham, London, S.W.

REPLY.—Unless there are no bee-keepers at all in your neighbourhood we do not think any appreciable advantage to your fruit-crops would be gained by establishing a hive in your garden, seeing that the bees would be more likely to help in fertilising the fruit on surrounding trees than on those quite close to their hive. 2. We also regret our inability to suggest an unfailing appliance for preventing swarming, or even likely to be of much assistance in achieving that end in the hands of one who has had no experience with bees or appliances. On the other hand, it may be said that many keep a hive of bees in a suburban garden, and derive much pleasure from it by making careful use of the knowledge to be got from a good book on bees. Your best course, therefore, would be to read up the subject, and then judge of the possibility or otherwise of making a start with bees.

[3691.] *Moving Bees.* — Would you be good enough to give me advice upon the following? — 1. I have at present three stocks of bees, and it is necessary to remove same before May 1 to another new stand about 100 yards away. What should I do to save the loss of bees which are so valuable at this time of the year? I read in the JOURNAL not long ago that "filling the mouth of hives with moss and allowing the bees to eat their way through would cause them to take fresh bearings of their locality." Would this answer, or is there some other way? 2. I had a valuable "Italian hybrid" stock, which when packed for the winter covered eight frames. To-day I have examined it, and find neither brood nor queen, and the bees cover only four frames. I suppose the mere fact of there not being brood in the hive means that there is no queen. What do you suggest for me to do in this matter? I send name and sign—G. M. N., Ryton-on-Tyne, March 20.

REPLY.—1. "Filling mouth of hive with moss" is too vague a term for general use. A little loose grass, or moss, that bees could remove or gnaw away to obtain egress in a day or so would no doubt answer, but you might easily fix either grass or moss so that the bees would take serious harm before they could release themselves. If you can take the hives into a cool place indoors and keep them quite in the dark while allowing for ventilation for a couple of days, then put them on the new stands at night and give them some little obstacle to climb over

—say, a bit of wood placed close to the exit—the bees will notice the change and not go back to old stands at all; but move them at once before weather gets warmer. 2. If queen has gone you can only utilise the bees by uniting them to another colony in the usual way.

[3692.] *A Beginner's Queries.*—I have four hives, but have not examined them since I shut them up for the winter, and so I ask:—1. When ought I to look at the hives, and commence spring feeding? I fed them in the autumn, carrying out all the instructions given in Mr. Cowan's "Guide Book," which is of the greatest help to me. 2. The entrances are now about four inches open. Is this right? I am a beginner, only having had my bees since last May; but with two hives only then I got 117 1-lb. sections of beautiful honey last year, and in September bought two lots of driven bees, and I have now four hives of bees, but have not examined the hives so far this year. I noticed yesterday several dead bees on the ground in front of each hive, and on fine days I have seen lots of them flying out and in, but could see no pollen on the bees when returning to hive. I am so keenly interested about bees that I trust you will forgive my troubling you.—A. K. S.

Reply.—1. You should examine their condition at once to make sure there is food in store, but, if properly fed up as directed in "Guide Book," there should be no need for anxiety on this score. 2. If no signs of robbing are seen, the entrances may remain from two to four inches wide unless very cold winds prevail, when one inch will suffice.

[3693.] *Bees Found Dead in March.* — Yesterday being fine I inspected my stocks and was sorry to find one of them defunct. The hive contained a fair quantity of bees and had plenty of stores. A number of the combs had a good supply of cells similar to those sent under separate cover, and I shall be glad to hear what you have to say on the matter. Is it disease of any kind? — Harry Street, Dunfermline, March 14.

Reply.—There is no sign of brood at all in comb, the cells of which contain nothing more than mouldy pollen, and where not mouldy the latter has been covered with a thin layer of honey, the latter being consumed by the bees when alive. As there was not a particle of food in the rather heavy piece of comb sent, the bees may have died of starvation on heavy combs with nothing in them but pollen.

[3694.] *Dangers of Infection.*—Will you kindly tell me if there is danger of bees infecting each other by mingling at the common drinking fountain, or artificial pollen supply? I treated two of my stocks last autumn for foul brood, and in case there should be another outbreak, or the cure incomplete, I do not want to risk my healthy hives.—M., Hailsham, March 14.

Reply.—There is no need to add to the many alarms in the direction named, for the risk is no greater than bees mixing on flower-blooms in gathering nectar than in drinking at the same water-trough.

[3695.] *Feeding Bees in March.*—As a subscriber to the B.B.J. may I ask for a little advice re my bees? I looked in at them yesterday for the first time since Christmas and find there is a little brood on the two middle frames, and the hives are half full of bees. Would you now give them thin syrup, or flour candy, as I find the bees will not use the pea flour? I put some in a shallow tin, as recommended in "Guide Book," but as soon as they get a particle on them they rub it off, leaving it on alighting board. I am pleased to say I have never known of foul brood in this district.—H. Luke, York, March 20.

Reply.—You make no mention of the stores now in the hive, and, if the supply is short, syrup food must be given as far more suitable than candy under present conditions.

Notices to Correspondents & Inquirers.

*** Correction.—Dr. Elliot writes as follows:—"Dear Sirs,—In my reply to 'J. N.' the words 'honey sac' (5831, page 103, line 27) should read 'poison sac.' With apologies for my stupid blunder.—Yours faithfully,

T. S. Elliot."

G. W. M. (Kenedal).—Moist Unrefined Sugar for Bee-food—Your sample is, in our opinion, pure cane sugar, but not suitable for bee-food because of its containing too large a proportion of the treacle in all unrefined sugars. If there is any tendency to dysentery, good thick syrup made from refined crystal sugar is needed as helping to check it, while syrup made from raw sugar will tend probably to add to the trouble.

Student. — About Swarms. — We cannot give "the earliest and latest date on which a swarm has been known to issue in the County of Kent." It ranges, we suppose, from April 1 (All Fools' Day) for "earliest" to September for "latest."

Suspected Combs.

Flos (Glenlivet).—Comb is affected with foul brood. We should on no account use the honey as bee-food, but it will be quite suitable for household use. Will reply more fully next week.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

CHANGES IN THE GOVERNMENT.

Several changes have recently taken place in the Government. Those more particularly of interest to bee-keepers are the following:—The Right Hon. Walter Hume Long, M.P., President of the Local Government Board, and formerly President of the Board of Agriculture from 1895 to 1900, to be Chief Secretary to the Lord Lieutenant of Ireland, in succession to the Right Hon. George Wyndham, M.P., who has resigned; and the Hon. Ailwyn Edward Fellowes, M.P., to be President of the Board of Agriculture and Fisheries, in succession to the Earl of Onslow, now Chairman of Committees in the House of Lords. The President has appointed as his private secretary Mr. T. L. C. Floud, who has had in charge the British Bee-Keepers' Association Bee-Pest Bill, and all particulars supplied by the committee, so that there will be no interruption in the progress of the work of obtaining and laying before the Board of Agriculture the evidence required either for or against legislation.

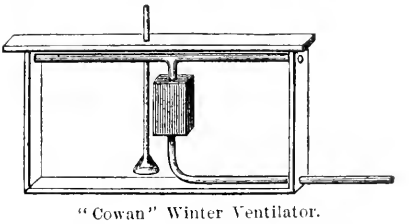
BRITISH BEE-KEEPERS' ASSOCIATION

(*Continued from page* 112.)

CONVERSAZIONE.

The members re-assembled at 6 o'clock, when Mr. T W. Cowan presided. The room was filled, among those present being Miss Gayton, Miss La Mothe, Mrs. E. E. Ford, General Sir Stanley Edwardes, Colonel Walker, Messrs. T. Bevan, W. Broughton Carr, Geo. Dow, W. Vivian Hatch, Jas. Howland, H. Jonas, W. P. Meadows, J. C. Mason, A. G. Pugh, W. F. Reid, A. Schofield, A. Sharp, F. W. L. Sladen, W. Sole, E. Walker, J. Willard, T. I. Weston, F. B. White, W. Woodley, Richd. Brown, F. H. Bevan, L. Belsham, L. S. Crawshaw, Fred. H. White, and E. H. Young.

The Chairman, in opening the proceedings, said that many of those present had seen the interesting article in the B.B.J. by Colonel Walker describing the "Clanstral" ventilated hive devised by the Abbé Gouttefangeas, and had read and understood the object thereof. He had sent for the important parts of the hive, which they saw before them, so as to make the explanation of the idea more clear. One of the problems that bee-keepers had been trying to solve was how to keep their bees strong and at the same time prevent them from dwindling in the spring. Strong colonies were necessary to gather nectar at the proper season, that was, when nectar was found at its best in the flowers. For the last 25 to 30 years bee-keepers had been trying to ensure that during the winter their bees might be kept as quiet as possible, and have sufficient ventilation, so that they should consume as few stores as possible. The smaller the amount consumed the less necessary was it for them to have cleansing flights. It was well known that a cold winter prevented the bees coming out of their hives, the result being that they generally did well the following summer in the shape of larger and stronger colonies. Mild winters, on the other hand, caused larger consumption of stores and more frequent flights of the bees, large numbers being lost from becoming chilled, and consequently the colonies became weak, just when they should be getting strong. At one time a great deal was said about spring dwindling, which was attributed to the older bees dying off rapidly, and efforts were made by stimulative feeding in the autumn to raise as many young bees as possible to live through the winter and commence the work in spring. Still, this did not entirely remove spring dwindling, and for the last twenty-five years many methods have been tried in order to save the mortality of bees as much as possible. It was thought that if bees could be shut up in the dark and prevented from flying much would be gained; therefore darkness with ventilation was aimed at in the various plans brought forward. As far back as nearly thirty years ago he (the Chairman) had tried experiments with this object in view. At that time he had some hives over his stables, two to each window. In winter these hives were placed close together, the number of frames reduced, and placed towards the side touching adjoining hive, and closed in with division boards, having a passage below. The entrance was by a long tunnel at the extreme end, so that much light was excluded, although it was impossible to make it quite dark. In 1879 he read a paper on "Wintering Bees," in which he explained a ventilating frame he had used with good results. This he now showed them (see illustration); it consisted of an



"Cowan" Winter Ventilator.

ordinary frame containing a tin box, 4 in. by 3 in., with a tube at the bottom, which passes out at the entrance of the hive, and a tube at the top, branching off to the front and back inside the hive.

This frame was placed in the centre of the hive, which was contracted in such a way that the bees were forced to cluster round the tin box. Thus the heat of the cluster warms the box, which at once causes the fresh air from outside of hive to enter at the lower end of the tube, and in its passage through the box the temperature is raised, and it flows out of the top tubes, and is diffused through the hive. The warm air thus entering at the top of the hive drives down the cold air and all the noxious gases. A small tube at the side of the box, having a funnel reaching to within an inch of the floor-board, and having an outlet outside the hive at the top, also assists in getting rid of the gases without creating a draught. In this way the hive was constantly supplied with pure air at an even temperature. Colonies treated in this manner turned out remarkably well, and were strong, but this frame was given up for simpler means. Then other methods of ventilation were practised; for instance, we had close-fitting crown boards with perforated zinc slides, perforated zinc ventilators on sides of hives, and Mr. Abbott introduced slatted crown board in five pieces. Then we had quilts, chaff cushions, and chaff boxes, always with the view of giving ventilation without draughts. In Germany many experiments had been tried, the conclusion from all these being that it was absolutely necessary to keep bees in perfect darkness, but supply ventilation. To shut up bees in ordinary hives was to run the risk of suffocating them, and the difficulty was to give proper ventilation without admitting light. In 1890 Jeker described the method then practised in the tall German hives. The frames are parallel to front entrance, and are placed behind a division board so that between this and the front of the hive a chamber is formed. The division board is close-fitting, and has a small opening in one of the lower corners to allow bees to pass out. The entrance is closed so as to leave a small opening at the opposite end to that in the division board. Light is prevented from entering by turning up the alighting-board, which is hinged, against the front of the hive. Although the chamber is darkened in this way, and it is a protection when snow is on the ground, the egress of the bees is not completely prevented, as they can get out at the sides of alighting-board, which at the hinged part is a couple of inches from the entrance. About ten years ago M. Preuss, of Potsdam, introduced a system of closuring bees, by means of a large vestibule, 6 in. to 8 in. deep, fitted to the front of his hives, and provided with perforated zinc front for ventilation. With this the bees were detained in the vestibule, but the mortality among them was very great, because on mild days they would seek the light and make every endeavour to get through the zinc, and in this way worried themselves to death. Preuss thought it was only the old bees that died off in the natural way, but the Abbé Gouttefangeas' experiments have shown where complete darkness is secured this mortality does not take place. As this plan did not keep the bees in perfect darkness, the Abbé Eck made an improvement. He provides a porch with a hinged alighting-board which turns up and completely closes this porch. The lower part to which the alighting-board is hinged has three rows of perforations, which allow air to come up through them. About an inch above is the entrance to the hive, with another alighting-board extending to the front the depth of the porch. To this is fixed a piece of wire gauze forming a square enclosure in front of the hive over which excluder-zinc is placed. To the roof of the porch is fitted a long chimney, so that when the porch is closed the board fits against the wire gauze frame and prevents bees getting out beyond it, and at the same time secures ventilation by means of the chimney and holes at the bottom, while the gauze frame admits of free circulation of air. The apparatus, which he called "Consignateur," was cumbrous, complicated, and too expensive for general use, and the tall chimney did not add to the ornament of the hive. Schaefer, who used Preuss's vestibule, covered it with a dark cloth to produce darkness, and also placed a wooden shutter with only the lower part fitted with perforated zinc, but this did not sufficiently darken the place. Buckholz had a porch which could also be closed, and was ventilated by means of tubes entering one on each side under porch roof, bending at a right angle, and following the sides to the alighting-board, where another bend took place, and in this way the air was brought to the entrance of the hive. Every one knows that the longer and straighter the chimney the greater the draught. Therefore it is not surprising that these short tubes with many bends did not prove satisfactory. We then have the Voirnot plan, introduced by M. Chardin. The Abbé Voirnot devised three hives having frames 13 in. by 13 in., so as to satisfy the wishes of all bee-keepers. The cubic hive had ten of these frames; the semi double fifteen frames, and the double twenty frames. It was the semi-double that was used for detention purposes. The brood-chamber containing the ten frames was separated from the honey-chamber, containing the five frames which were removed, by a perforated division-board, and the entrance turned round so that the

bees had to pass through an ante-chamber before getting to their combs. The space above was closed by perforated zinc, and the front ventilating tube in roof was stopped up to obstruct the light. A piece of zinc with 3-16 in. holes was placed at entrance, and light was further excluded by raising the hinged alighting-board. This plan is in principle almost identical with that described by Jeker and recently mentioned in the B.B.J. by Mr. G. S. Newth (page 83). Kanitz had a wire-gauze frame which was applied to his hive for the same purpose, and Sylviac attached a board to his porch, which reached within $\frac{3}{8}$ in. of the roof, and in this way admitted ventilation. There was also a small passage cut at the bottom of this board to allow of one bee passing at a time. There were several other devices that could be mentioned, but he would only allude to that of Weippl, who had adapted the detention plan to a bee-house. He had sliding doors which, when closed, produced complete darkness, and in this way all the bees in the house could be kept quiet and ventilated.

All these inventors aimed at producing darkness and giving sufficient ventilation. If bees could be kept in the dark, they would be quiet as they are at night; but with an ordinary entrance it would be dangerous to close it for fear of suffocating the bees. When the Abbé Gouttefangeas began to think about confining bees to their hives, he found that the peasants in the mountains regularly closed their hives for the winter months. They placed four or five pieces of hemp straw, four inches long, on the alighting board, and allowed the ends to enter at the entrance of the straw skeps, the aperture being covered up with cow manure. These hemp stems were one-eighth to three-sixteenths of an inch in diameter, so that very little air could pass through, although it was sufficient to allow of the bees being shut up for five months during winter. M. Gouttefangeas tried the same plan with frame hives, but these being so very much larger, the ventilation was not found sufficient and bees became suffocated. He continued his experiments with the idea of providing bees with the same accommodation as all other animals, namely, a house with a door that can be closed to protect them, and a chimney that would act as a ventilator. The different parts he (the chairman) placed before them would assist them to understand the principle upon which the invention was based. It would be seen that the chief part was a porch, similar to those we use, except that the alighting board is hinged so as to turn up and completely close the porch and thus make it quite dark. There was some difficulty in making a continuous alighting board with a hinge that would exclude the light, but it could be seen that the difficulty was got over by using a joint such as is fitted to the flap of a card-table. This porch, when closed, forms the detention chamber, and is large enough to contain about seven quarts. The porch can be made either part of the hive, or can be attached to it, and he (the chairman) did not see any difficulty in applying it to our hives. Darkness being obtained, the next point was to obtain ventilation without admitting light. He tried a number of experiments, as he wanted something that could be applied to any hive and be sufficiently cheap to be within the reach of all. Canals in various positions were tried, and he ultimately decided on tubes. It is well known that the larger and straighter the chimney the greater and better the draught, and he found that it required two tubes of 50 centimetres to give the same draught as one of 90 centimetres, but as such a long chimney would be unsightly, he decided on having the two tubes. These pass through the porch roof and alighting board, and project about four inches at each end. The tubes are pierced with holes, as will be seen, just above alighting board. (Reference to illustrations on pages 72 and 73 B.B.J. will assist in understanding the description.—Eds. B.B.J.) These tubes he found effectually kept out the light, and the inventor points out that if one looks up a very tall chimney shaft in the daytime stars are visible, showing that light is obstructed from passing down the chimney.

With an apparatus of this sort, which the Abbé Gouttefangeas has had at work for three years, he has been able to confine his bees for five months, allowing them cleansing flights only once a month. He found that at a temperature of 57 deg. to 59 deg. Fahrenheit the bees, when shut up, remained quiet on their combs. At 59 deg. to 60 deg. a few would come out into the porch and look about, while at 62 deg. to 64 deg. large numbers would come out. In the spring it was quite a common occurrence for a few days of fine weather to succeed cold days. As soon as there was bright sunshine, the bees would come out and inspect the vicinity of the hive, while some more venturesome than others would move their wings and fly off. That enticed others, but these flights were fatal, as many of the bees became chilled and never returned to the hive, and just when the colonies should be gaining strength they would be dwindling. It was at such times that a porch of this sort was most useful, for it tended to keep the bees quiet, while breeding was not interrupted, for the inventor has found that it had a moderating effect upon the internal temperature, of course within certain limits.

It is not likely that we could confine the bees for five months, as Abbé Gouttefangeas had done at an elevation of over 3,500 feet, where the cold would be more regular than we get it in our winters; but there were long spells where it would be an advantage for us to have the means of shutting up our bees. The inventor recommends that during winter and spring the hive should be closed at night and always when the temperature is below 46 deg. When the weather is calm at 50 deg., or even 48 deg., the porch can be opened. If the day was windy and weather stormy or unsettled, wait until the temperature rises to 53 deg. or 57 deg. If the weather is doubtful keep closed, as the flow of nectar at such times is small and does not compensate for the loss of bees. He found when the sun shines at a temperature of 57 deg., the ante-chamber would contain many bees, and he recommends that bees be allowed a cleansing flight on bright, warm days every three or four weeks in winter; but even this time could be prolonged if necessary. When the temperature was down to 48 deg., it was perfectly safe to leave the door open, because bees did not leave their hives at such times. The great advantage of the system was that the bees could be confined or let out in accordance with the wish of the bee-keeper. Now, in the spring bees require a great deal of water for rearing their brood. This they only collect as they want it, and if they are kept closed in this way, it was absolutely necessary to provide them with water, and that was one of the things the Germans were very pronounced about. Our object in giving bees diluted syrup in spring was to provide them with more water, but this was not sufficient. Preuss found that bees thus confined would consume a litre (one and threequarters of a pint) of water every two days. That was a large quantity, and it was no doubt the principal motive of the bees' flight in the spring; it was in that effort to get water that so many perished. If water was not provided it would make them very unsettled and determined, if possible, to get out. Sweetened water could be given from an ordinary feeder, and if the bees had to feed on syrup, this could be diluted in such a way as to provide the necessary water. The Abbé found that breeding was not interrupted by closuring the bees, and they remained perfectly quiet. Bee-keepers would admit that if the bees could be kept perfectly quiet, so that the consumption of their stores was lessened, and the usually large spring mortality prevented, apiculture would have made a great step in advance. The bees would be preserved and enabled to take full advantage of the honey harvest at the right time. The Abbé had stated that his harvest had increased very much; in some instances it had doubled, and in one case trebled. Besides the chimneys there were other means of ventilation, and he (the chairman) now showed various forms of canals that could be used either on the floor board or sides of the hive. These, as would be seen, are covered with perforated zinc and have slides over them so that light is excluded. For a hive with an ordinary entrance he used a two-piece ventilating door. The tubes in these were square and open at each end, as the Abbé found square tubes obstructed light better than round ones. The tubes nearest the entrance were perforated, so that when they were closed a current of air passed out at the ends. For nuclei there was a single slide, and it would be admitted that it was a great advantage to be able to keep bees in these confined without any danger of their being robbed or wanting ventilation. There were many ways in which the invention could be applied besides those mentioned.

Now as to how the invention can be applied. One of the advantages claimed for the system was that in the winter an idea of the condition of the population can be arrived at without opening the hive. The chimneys are provided with hoods, which not only assist to obstruct the light but prevent snow from entering the tube. If the hood be turned down, and the nose applied at the top of the tube, the smell would indicate whether brood was being reared and in a healthy state, and a tap on the side of the hive would discover whether the bees were in good condition or not. In that way the hive could be satisfactorily diagnosed. Hives could be moved with ease short distances, for they would be closed, and the bees kept in confinement for a short time, or as long as the bee-keeper likes, as it is well known that bees kept closed in this way soon forget their old locality. Then in making swarms it is not necessary to take them to a distance, and when the number of bees introduced into a hive is sufficient it can be closed, and there is no danger of the bees going back to their old stand if the hive remains closed for a day, or even two days. Colonies are also easily equalised by placing them near each other, and when sufficient bees have left one hive, closing it and compelling the bees to enter the other one. This in its turn can be closed for a certain time to allow the bees to forget their locality. It is evident that this plan can be applied in many ways and permits us to dispense with many manipulations. It is practically adapted for stopping and preventing robbing. Nuclei have already been alluded to, and he need not mention the advantage of being able to

confine bees during queen-rearing, and in an ordinary hive all know how difficult it is to prevent robbing, and how when it is once commenced it is still more difficult to stop it. With the Claustral hive nothing is more easy; the robbers can be caught in the act, imprisoned, and the demoralisation of the apiary prevented. One has merely to close the hive that has been attacked, and, after a few minutes, open it, when all the robbers, believing night to have come, rush off home to their own hive, where they can be shut up. Or, if it is difficult to find out which is the robbing colony, close all the doors, and after a few minutes, open one and watch the bees, and if they are the robbers, they will make a turn in the air and fly towards their own hive. This can be opened, and when they are all in, the bees imprisoned and all the others released. Then, again, how easy it is to confine colonies during manipulation, or when feeding is necessary, or when extracting and returning combs for cleansing! In case of bee-pest a colony could be treated to medicated food and isolated, making it possible to deal with it without danger to any of the other colonies in the apiary; and, indeed, anything can almost be done without deranging the others by simply shutting up the hive. He (the chairman) had given a brief description of the Claustral hive, and would like the plan thoroughly tried in this country. He would be glad of discussion on the subject, and would be prepared to answer any questions that might arise, as would also, he was sure, Colonel Walker, who could do so much better than he, and whom he would now ask to express his views.

(*Report continued in our next.*)

LANCASHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the above Association was held in the Scientific Society's Hall, Preston, on February 25. Mr. W. A. Cook presided, and the members present included Messrs. Geo. Roberts, F. H. Taylor, Dr. B. Jones, Geo. Rose, J. F. Williamson, P. Shackleton, W. Lloyd, W. Lowe, H. Fenny, E. Gardner, A. M. Fielding, R. Rymer, J. Jones, Ed. Foster, J. H. Walmsley, H. Dandy, G. Dawson, Richard Tyrer, J. H. Johnston, and others.

The minutes of the last general meeting were read and confirmed.

The Chairman then made some remarks on the report—as issued by the secretary—which showed an increase of membership, there being now 386 names on the books, as against 358 in 1903. Sixty-four new members had been enrolled, and there were thirty-six removals from list.

The expert reported having visited 353 members and twenty-seven non-members. He had examined 1,170 frame and fifty skeps. Eighteen apiaries were found to be affected with foul brood, the diseased stocks numbering thirty-four. The treasurer made some remarks, explaining that the additional expense incurred for expert work last year accounted for the reduction in the balance.

The report and statement of accounts were adopted. Votes of thanks were accorded to the Committee and officers of the Association.

The Right Hon. Lord Balcarres was re-elected President, and Messrs. Geo. Rose, G. Roberts, Cook, Fielding, Walmsley, Lloyd, Rymer, Score, Fenny, Tyrer, Dr. Jones, and Dr. Anderton were elected the Committee; Mr. J. F. Williamson secretary. Mr. F. H. Taylor treasurer, and Mr. A. Wood, A.C.A., auditor, were re-elected; and Messrs. J. F. Williamson, J. Gray, and Dr. B. Jones were appointed lecturers for the year.

The question of foul brood legislation was then brought before the meeting, and after discussion it was decided that the meeting approve of the Association supporting the same.

In the evening there was a well-attended social gathering, at which Mr. J. F. Williamson gave a lecture on "Bees and Bee-keeping," illustrated by lantern-slides. The meeting closed with a hearty vote of thanks to the chairman and lecturer.—J. F. WILLIAMSON, Secretary, Byron Street, Fleetwood.

(*Reports of Annual Meetings of the Leicestershire B.K.A. and of the Cumberland B.K.A. are in type, and will appear in our next issue.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

SPRING!

[5844.] *How are Stores?*—In earlier districts this question will already be settled, and even in later ones most of us have taken at least a momentary peep under the quilts, and decided that they are not yet quite exhausted; all were found alive and all had ample stores. Here let me sound a warning note. This is the period, active breeding having set in, when stores disappear at an accelerated pace. For the

months to come, one pound is likely to be consumed for every *ounce* required during each of the past six months. So, 'ware the cupboard, and replenish if necessary. Spring has come and every thing is waking from its winter sleep. "In the spring a fuller crimson comes upon the robin's breast." Birds talk love, insects rouse from their lethargy, and bees hum. Flowers are showing in bloom in increasing number and variety as the more genial air encourages them to spring from the late cold ground. Already pollen is plentiful, even in late districts, and honey is to be obtained at least in minims and perhaps drachms. All this leads to activity and progress within the hive.

The spring examination should now take place. Every hive should be examined on the first available genial day of April. Clean floor-boards, withdraw all old or ill-built combs, test all hives as to health, examine all as to queens, make sure stores are ample. If stimulating is to be done, start six weeks in advance of the expected honey-flow, so that the stock may build up in time. Unite where the numbers are too few to pull up if left alone, and in the case of all queenless stocks. Renew coverings, if damp or mouldy. Add to them rather than lessen their numbers. Then disturb colonies as little as possible for some time. A good knowledge of their strength and progress may be gleaned by outside observation at different hours of the day. As a rule, every one showing active pollen-carrying in the early forenoon on a good day may be relied on.

Introducing Queens.—In continuation of several methods for carrying out this rather delicate operation successfully, I give the following: — Seize the queen gently by the wings from behind and give her a dip in a cup of clean water, keeping her under for the space of about ten seconds. Then introduce her among the strange bees, and they will accept her without any question. Try it!

Honey Imports.—I lately called attention to this subject to prove that, from actual facts and figures, the foreigner shows no signs of crushing out home producers, but, on the contrary, is consigning honey in decreasing quantity. The £29,000 worth imported for the past twelve months is under the average for more than twenty years, and amongst the smallest totals on record. The exceedingly interesting statistics supplied by Mr. Weston on page 395, as to the source of foreign supply and its value, should receive careful study from bee-keepers. I need hardly add that the thanks of our fraternity are due to the compiler for favouring us with their production. One point he brings out deserves special notice. Of the total recorded only one half, £15,166, is really *foreign*, the other half, £15,183, comes from our own colonies.

Irish Statistics.—While on the question of figures, I may note one or two points in regard to apiculture in the sister island. The total honey harvested was only one-half that produced in 1901—359,624 lb. (718,218 lb.). Beeswax fell from about 6,000 lb. to a cake weighing only 3,850 lb. Hives at one time numbered 39,000; the last return sets them down as only 26,500. Frame-hives are increasing, "other" hives show a heavy drop, pointing I suppose, the fact that the old straw skep is dying out. Only fourteen hives are credited to every 10,000 acres. I once more sigh for the time when we can have statistics showing the advance of apiculture on this side of the Channel compiled by the Board of Agriculture.

Advance Apiculture.—That reminds me that our friend "Uncle Sam" has stolen a march on us in this respect. He has actually recognised bee-keeping as a national industry, and deems it one deserving of encouragement and State aid. The Government has given it a distinct recognition by an appropriation of £1,000 per annum. They have established an experimental apiary, instituted a Bureau of Apiculture, appointed an Apicultural Investigator, two special Agents in Apiculture, and an Apicultural Clerk; all four of whom will devote their entire time exclusively to investigations and experimental work. The industry should advance in the States with leaps and bounds. Has anything like a concerted combined effort ever been made in this country to urge on our Board of Agriculture that it should take the industry under its protecting care? Why should not we have a D.A.T.I. fostering bee-keeping?

Vol. Thirty-two.—The receipt of bound volume for the year 1904, the other day, enabled me to make comparisons with former issues, and I have come to the conclusion that these are in every respect favourable to the latest production. The book forms a fund of information and instruction of the highest value to all who are intending to make a start in apiculture. I would consider the cash invested as well spent if I were giving a present to any bee-keeper entering on his novitiate, as for any such its perusal would be invaluable. One wonders how so much fresh and interesting matter can be produced year after year on so circumscribed a subject as apiculture. "The Homes of the Honey-Bee" are as pleasing as ever, and add an interest to the volume which I, for one, would very much regret if it lacked. The idea of issuing them was one of the happiest hits our Editors ever made. All are interesting, but, for diverse reasons,

I take a special interest in those on pages 35, 295, and 455.

ERRATA.—In last contribution, for Vano read *Varro;* for Merve read *Mewe;* and for these stocks read *thirty.*

CARE OF BROOD-COMBS.

[5845.] I have read with much interest Mr. Crawshaw's letter (No. 5826, page 96) on the care of brood-combs, but I should be very much obliged if Mr. Crawshaw would kindly give me a little further information on the subject. First, what kind of nozzle is required to the garden syringe to make it suitable for washing the combs? Would not the ordinary one allow too much water to pass at a time and so knock the combs to pieces? On the other hand, surely the spray would not have sufficient force to clean the combs? Also, what quantity of Condy's Fluid or Izal would be used? And would this treatment be advisable for combs in shallow frames that have been put away during the winter, for those are the only ones I have except the brood-combs in the hives? I would also be glad of a word of advice on washing the hives after their spring-cleaning with some disinfectant, and, if so, what, and in what proportion? I have no spare hives into which to put the bees while their's dry.—F. T. LANE, Cornwall.

MOVING BEES SHORT DISTANCES.

AN IMPROVISED DETENTION-CHAMBER.

[5846.] I bought an old frame-hive with bees from a friend ten days ago, and they were only 150 yards from my place. My trouble was how to keep them in their new place when I got them home, so I tried the "detention system," and fixed them up in the dark for just a week on their old stand, then moved them in the evening, putting peasticks, etc., in front of the hive to make them mark the place. I am pleased to say it answered well, and I do not think a single bee went back. I put a skep and board on their old stand and watched for some time, but never saw a single bee return. I was rather fixed how to arrange a method to give them air and keep them in the dark, but I solved it when I picked up a square cigar-box with a division in it. I enclose you a rough drawing, trusting you can follow it. I could send you the original if you would care to see it, as the drawing seems such a bungle.—G. W. M., Kendal.

[Your sketch is hardly clear enough for reproducing, but it shows how a little ingenuity, in adopting the principle of the "Claustral" hive may be made to serve one of the many purposes to which it may be applied.—EDS.]

NOTES FROM NEWMARKET.

[5847.] "Gloomy winter 's now awa'," and the roll-call of the apiary may be taken. I have to report a loss of 1 per cent.: cause—queenlessness; otherwise stocks are in good heart, and a week's ideal weather has caused a rapid extension of the brood-nests. On Friday, 24th, one continuous stream of "dusty millers" was entering each hive, bearing huge pellets of pollen gathered from the box, which is this year yielding it in unusually large quantities.

It is often easy to prophesy negatively early in the year as to the season's ultimate results, but very difficult to do so positively. In March of last year, for example, it needed no extraordinary amount of acumen to discern that the season must of necessity be an indifferent one; but it would be rash yet to declare that this will be good—the possibilities of disaster between now and June are so plentiful. But the auspices are very favourable. The "layers" are just now a sturdy, vigorous plant with the well-developed root-growth so essential to a free secretion of nectar during the period of bloom; and although the flower is of no account so far as yielding surplus, it is invaluable as a stimulant to brood-rearing, and it now shows a profusion of blossom-buds ready to burst into flower.

Providing always that no set-backs are experienced—which is, perhaps, "providing" a great deal—I predict swarms in this district early in May, and a generous honey-flow in June and July.—CHAS. H. BOCOCK, Ashley Apiaries, March 25.

PRICE OF HONEY.

[5848.] I have occasionally noticed advertised in B.B.J. some wonderfully cheap "extracted," etc., purporting to be the product of the bee; but for being downright "uncanny," I do think the "finest Scotch" at 4d. a pound "takes the cake." I write as a bee-keeper owning a fairly large apiary, who sold several cwts. of honey last year, none of it at less than 6d. per pound wholesale, and quite a good portion at from 8d. to 10d. retail. I have now sold out my harvest for 1904, and am busily engaged in preparing several pounds' worth of appliances in hope of a good honey-crop this year; but if I thought that I should not be able to realise 6d. per pound wholesale for that crop—which, alas! may never materialise, owing to our fickle climate—I would either at once sell my apiary at any sacrifice or make a bonfire of the lot, for I should certainly never have the "assurance" to presume that I could afford to tickle the palate of the mighty John Bull with any stuff worth callin~ "British" honey at less per pound than 6d. With regard to the honest

"middleman," they, as a class, seem to act as though they had a sort of divine right to grow rich any way and anyhow at the expense of the industrious (and too often struggling) *producer*, and an easily "gulled," because often uninformed, consumer. I send name and sign — CAMBS. BEE-KEEPER, March 22.

REVIEW.

Queen-Rearing in England, by F. W. L. Sladen, F.E.S., published by Houlston and Sons, London, and B.B.J. Office, 10, Buckingham Street, Strand, W.C., price 1s. 1d. post free.

We have in this book of fifty-six pages the result of Mr. Sladen's practical experience in rearing queens in this country. Articles on the subject appeared in the B.B.J. about a year ago, but the author has found it necessary to add so much important new matter that the book before us may be said to have been entirely re-written.

In the eight chapters the book contains we have all the best methods described in a clear and succinct manner, so that any one following the instructions carefully cannot fail to succeed in rearing a few or many queens, as he may wish. He first describes queen-rearing in Nature; then gives details of the most up-to-date methods of queen-rearing by means of specially prepared cups, clearly explaining how and when larvæ should be transferred to these cups, and how they should be treated afterwards so as to secure the best results. Considerable space is devoted to forming nuclei and their management; the B.B.K.A. standard frame being recommended in preference to the small frames used in some parts of America, as more suitable for our climate. There is also a chapter on rearing drones for fertilising the queens, as it is well known that the drone influences the queen and worker progeny, so that it is important that queens of the best strain should be selected for drone-rearing, and that the drones also should be reared under the most favourable conditions.

The races of bees are described always with the view to obtaining the best strains, and advice is given respecting breeding for improvement.

The book is very well got up, and illustrated with twenty-five figures. It also contains a beautiful frontispiece, printed in colours, of a golden Italian queen and worker; also a large folding half-tone plate of a batch of queen-cells built from artificial cups. The author has also added his notes on "A Scent-producing Organ," "The Honey Bees of India," and "Enemies of the Honey Bee in South Africa."

We recommend the book to those who wish to make themselves acquainted with the methods of queen-rearing in this country, and feel sure all will be interested and pleased with the amount of information contained between the covers.

Queries and Replies.

[3696.] *Moving Driven Swarm One Mile.*—I am buying a skep of bees, which latter are now located about a mile from here, and wish to know: 1. When I drive a swarm from them, and place the bees in a frame-hive, must I put the new hive on the stand now occupied by the skep, or will the bees stay with the queen, as in the case of natural swarming, if I bring the stock here? I fear they will return at so short a distance. 2. If the "Swarthmore" pamphlets are in your hands now I shall be glad to send remittance for price and postage if you will say how much.—I send name, etc., and sign—B., Lincs.

REPLY.—1. The driven swarm will remain with the queen on the old stand if they are left there; but why not set up the frame-hive on the stand it is intended to occupy in your garden? If that was done the swarm might be driven and hived at home, while the parent skep could be left on its old stand for ten days, and then be brought to your own place. This would be the best plan, and no bees would be lost. 2. "Baby Nuclei," by "Swarthmore," will best sent for 2s. 1d., post free; but the first supply is sold out, and it will be some days before a second lot comes to hand.

[3697.] *Sending Observatory Hives to Shows.*—By kindly answering the following queries in B.B.J. you will much oblige an old subscriber. 1. What is the customary method of conveying three-frame observatory hives to show, the bees, too, of course? 2. In stocking such a hive, are any bees used other than those adhering to the three combs put in? 3. Is it safe in the case of two stocks standing side by side to remove one and throw its flying bees into the one left—I mean safe as regards the strengthened stock? I send name for reference. — OLD SUBSCRIBER, Leicester, March 22.

REPLY.—1. If the observatory hive can be carried by hand to the show, it is best to fit it up at home; otherwise the combs and bees should be taken in a travelling box and the observatory hive fitted up on the show-ground, preferably on the evening before the show opens, in order that the bees may settle down in the hive and be made secure ready for the show-bench. If they cannot be attended to overnight, the frames should be transferred to the obser-

vatory hive early on the morning of the show, so that the flying bees should have time to gather into the hive before visitors begin to arrive. 2. If sufficient bees are not on the frames to cover the brood in combs, some should be added before the travelling box is closed for the journey. 3. No; it would be risky to do this, as possibly it might cause fighting between the two lots of bees.

[3698.] *Drone-breeding Queen in Hive.*—When looking round my hives on Thursday morning, the 16th inst., I noticed what I took to be drone-brood thrown from one. At mid-day I made an examination, when my suspicions proved correct, as the piece of comb enclosed will show. I shook off all bees and removed the frame of comb till I could decide on my future course. I may say the queen was there, looking all right. Next evening I removed all brood from cells and destroyed them, and eventually decided to unite the bees with another colony. I cannot account for this queen being a drone-breeder as the colony did well last year, and has come through the winter satisfactorily. Not having had any experience of foul brood, I thought I would be on the safe side (hence the piece of comb enclosed) before uniting. If I have not destroyed the means of telling by removing the brood, I hope you will "wire" me if you detect any disease. If there is no foul brood you need not "wire," and I shall conclude I may unite them with safety, and I will look in next week's JOURNAL for any remarks you deem necessary and are pleased to make under initials —Z. A. D., Clanfield, March 20.

REPLY.—There is no disease in comb, and as queen is evidently drone-breeder, she should be destroyed and bees utilised by joining to another stock as proposed.

[3699.] *Disinfecting Hives.*—In January I scrubbed out a hive with diluted carbolic acid, and rinsed it well afterwards with hot water; gave it a coat of paint and placed it out in the open so that it might dry and lose the smell of acid, etc. On opening and examining same, however, a few days ago I found that it smelt quite strongly of the carbolic. I intend transferring a skep of bees to it next month, and so ask:—Will the bees take to it all right? If not, kindly advise me what to do. I send name and sign — ANXIOUS ONE, Wokingham, March 20

REPLY.—If the wood is so saturated with carbolic as to retain its strong odour after two months, we should give it a coat of paint inside, and leave it in the open air for a week to allow the smell of paint to disappear.

[3700.] *Bee-recipes — Candy Making.* — Being a new hand at bee-keeping, may I ask for replies to the following questions? —1. I made some naphthol beta solution last autumn, according to instructions in "Guide Book." Since then it has turned the colour of whisky. Being so, is it fit for use this year? 2. I also made some candy which, at first, could be scraped soft easily with finger, but after being on the hive for some time I find it is much harder than at first. Do you think there is any fault in making, as it must now be very difficult for bees to consume it?—G. T. BOGGIS, Bungay, Suffolk, March 23.

REPLY.—1. If properly made—and kept corked—the solution will keep good for years. 2. The test of well-made candy is its remaining soft for a considerable time. If properly boiled—and stirred while cooling off—the candy retains its soft, buttery consistency quite long enough for all bee-purposes. If overboiled, it becomes hard as stone in a few weeks and is then entirely useless as bee-food.

[3701.] *Insurance for Bee-keepers — Requeening Stocks.* — 1. I shall be glad to learn if I may yet send amount to cover insurance on my apiary up to August next. I have just discovered that by some means the matter was overlooked last year. I should, of course, remit the amount in full, together with any reasonable fine which might be imposed for the omission to send at the proper date. 2. I have two hives queenless. Is it too early now to attempt to re-queen. I send name and sign—MOORBROOK, Sheffield, March 22.

REPLY.—1. If you are a member of a county B.K.A., the hon. secretary will afford the information asked for. Non-members should write to the secretary of the B.B.K.A., Mr. E. H. Young, 12, Hanover Square, London. 2. Stocks now queenless may be re-queened whenever queens can be had: but if the two colonies in question have been long queenless, and bees are now reduced considerably in numbers, it may be advantageous to unite them under one queen when latter is available.

[3702.] *Sugar for Bee Food.*—As a subscriber to the B.B.J. for some eighteen months may I venture to ask for a little information. I have fed up my bees for two winter seasons on pure cane sugar granulated, the price of which has gone up considerably, as you know, so I asked a friend to get me a sample of cane sugar (which I herewith enclose) suitable for bee-feeding, and he tells me it is pure cane sugar. I therefore ask:—Is this a suitable sugar for them for spring stimulation? A reply in your next will much oblige.—G. W. M., Kendal.

REPLY.—The sample is doubtless pure cane, but being a moist, unrefined sugar it is unsuitable for bee-food when stimulating. Raw sugar is too laxative in its effects when made into syrup and might

cause dysentery if bees are weakly. We should use yellow Demerara crystals, which are partly refined and cost very little more than the raw sugar.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

Bees (Tyrie).—Bees Found Dead in March.—From details given we should say the bees have died of starvation through being unable to reach the stores during the cold weather of some weeks ago. We regret to say the comb sent shows also that the bees were suffering from foul brood. In view, therefore, of this, the bee-less hive should be taken indoors at once and dealt with by burning combs, etc. If left outside and bes can get at the food your other stocks will probably start "robbing," and suffer accordingly.

G. W. (Wealdstone).—Bee-forage.—We are obliged to you for drawing our attention to what is obviously a printer's error in our reply to "B. Co., Birmingham" (page 100), seeing that none of the heaths included in bee-forage ever bloom in spring. The words "spring heather" should be *sprig of heather*, and were so written; but printers are not bee-men.

J. B. (Hale).—Bees Found Dead in March.—The comb sent contains only food (honey or syrup) and pollen, the latter being wet on its surface as if having been covered with a thin layer of food through the past winter. If the five frames of honey still in the hive was at one end of the hive, and the dead bees were found at the other end, it would point to death from starvation through the bees being unable to reach the food during very cold weather, it being common to find bees dead from want with plenty of food a few frames distant. Inspection of combs is the only way to clear up this point; we cannot judge from a distance.

C. A. (Enfield).—Peculiar Appearance of Dead Drone.—The male organs are sometimes extruded as in the insect sent—through excitement; but a somewhat similar appearance is seen after copulation has taken place.

Novice (Deeside). — Bottle-feeders. — We cannot say what the demand would be for such a feeder as is proposed; but our views against incurring cost of patenting small bee-appliances are well known; and thoroughly efficient feeders, slow and rapid, are now so plentiful that it must be something exceptionally good to stand any chance of a large enough demand to warrant expense in protecting. We advise a thorough trial of your idea and comparison with the feeders now in use before going further than this at present.

Bee-keeper (Cockermouth). — Candy-making.—Sample sent has been a little over-boiled, and, in consequence, is too hard for bee-food. Only for this fault it would be a nice candy.

E. H. P. (Kent).—Italian Bees and Pollen-gathering.—We have never noticed any difference between the working of natives and Italian bees when pollen-gathering. The latter work on the willow-palm equally well with blacks. There may have been some other source of supply at the time to cause the difference noted, because Italians do work on some flowers that natives seem to pass by.

(Miss) M. S. (Darlington).—Dead Bees Cast Out.—Neither dead bees nor contents of comb sent show any signs of disease; but the "speckings" seen on alighting-board and front of the particular hive in question—and on none of the other hives—indicate that bees are suffering slightly from dysentery, as you suppose. It can only be a mild attack, or the comb sent would also have been "specked," which is not the case. A little warm, thick syrup will probably set the bees right, seeing that warm weather now prevails.

E. H. (Haslemere).—Joining B.K. Association.—Your best course will be to join the Surrey B.K.A., when the hon. secretary would no doubt put you in the way of securing help in packing the hive for removal, and put you in the way of starting bee-keeping with a chance of success. The hon. secretary is Mr. F. B. White, Marden House, Redhill.

G. S. (Wimbledon).—Bee-keeping as a Business.—If you could call at the B.B.J. office any day after Wednesday we would give a word of advice on proposals made, but we have no time for private correspondence.

G. S. (Sevenoaks).—Wax-moth in Hives.—The larva sent is that of the true wax-moth, Galleria cereana.

A. M. (Milnthorpe).—Fermented Honey for Use as Bee-food.—We are unable to say why honey put up in 2-lb. jars should ferment, while that in 1-lb. jars remained all right if conditions were exactly the same in both cases.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial. Notices. &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(*Continued from page* 125.)

Colonel Walker hoped that most of the audience had read what he had had the pleasure of writing on this subject in a recent issue of the B.J. He did not then praise the invention, but simply put it before the readers, feeling sure it would speak for itself. With regard to dwindling, the author spoke also of autumn dwindling, by which he meant that bees tempted to fly out in the autumn as well as in the spring became lost or destroyed. This, of course, was unfortunate, because when the queen should be encouraged to breed she could not do so for want of population, so that M. Gouttefangeas' invention was a double advantage in that it mitigated the dwindling evil in autumn as well as in spring. The inventor was anxious to make his idea known, and had asked him (the speaker) to put it before the B.B.K.A. There might be some objections to it, but one must remember that the invention was young yet, and might be elaborated, or simplified, and made perhaps more adaptable to all needs. The abbé was convinced that the bee-keeper should have power to shut up his bees. If there was any difficulty about ventilation the chimneys could be made larger or smaller, with more holes, or conduits could be used, without interfering in any way with the principle of the contrivance. The inventor himself did not use chimneys so long as those shown now; his projected only four inches above and below. The conduits could be put in any position on the floor-board, sides, or back of the hive. They were open at each end, so that a current of air was always circulating past the perforations in that side of the tube nearest to the hive entrance. M. Gouttefangeas recommended that one should be put at the back of the hive. The danger of propolisation had been mentioned, but bees would not go outside their hives to propolise; therefore, the porch was free from such risk. There had to be a little nicety in the manufacture with regard to keeping the detention chamber perfectly dark, but although most important this was easily managed. The bees must be persuaded that it was night, and of no advantage for them to go out. The peculiarity of the invention was that the bees were not shut up within their hives proper. They had naturally the habit of going to the mouth of the entrance, an inch or two in front, and there perambulating up and down at night-time; and by this invention an artificial night was produced under natural conditions. In the ordinary way, bees shut up in a hive always became excited, but here they were deceived, and led to believe that there was an eclipse or continuous night, and having stores within they remained in a healthy state, without any disturbance. Besides the advantage as regarded spring and autumn dwindling, the bee-keeper had the still greater advantage of thorough command over his bees, the power to shut them up at any moment, and exclude them from where he did not want them. Then, manipulations could take place at any time of year, and bees were easily made to remain in newly-established nuclei, positions could be changed at any time by simply shutting up the hive for three or four days, which could be done without detriment; and the dissemination of foul brood could be prevented by a similar process. The inventor had not alluded to this disease, because where he lived it was unknown; but it was obvious that by shutting the hive the bees could not choose their own food, and must accept what was given to them or starve. He believed that the more bee-keepers studied and thought about the Claustral hive the more they would be pleased with it.

The Chairman said there had been a difficulty about propolisation when they had the crown boards with perforated zinc slides. In autumn the slides were obliged to be moved frequently and boiled to get rid of the propolis. During the winter the bees did not propolise, but in the autumn they were sure to do so. He did not know whether vaseline would get over the trouble, but it might be done by getting two or three spare pieces of perforated zinc and substituting one for the other during the time propolisation takes place. With regard to keeping the bees perfectly dark, he could not see the slightest difficulty in applying the invention to modern hives in this country. Some one suggested that the light could not be kept out with these tubes. The rays of light passed straight through, and were diffused by the time they reached the holes; besides, the hoods helped to obstruct the rays of light. The abbé also speaks after three years' experience, and we have no reason to doubt his veracity. In answer to Mr. Weston, he further stated that M. Gouttefangeas was in communication with an English manufacturer with the object of putting the invention on the market.

Mr. E. H. Taylor stated that he had been in communication with M. Gouttefangeas, from whom he had acquired the patent rights for making these inventions. He hoped within the next fortnight to get the whole business in working order.

General Sir Stanley Edwardes said in reference to propolisation that if a space be left by drilling or otherwise, which was just too small for a bee to get through, she

would not propolise it, and that was especially the case during winter time. He had found that by having a bridge inside the hive, between the division board and front of hive, with two little pieces of wood at each end, the ends of the wood projecting to an extent which was smaller than a bee could pass through, chinks were left inside the hive to allow of ventilation. He had bored holes in the division board, and thus obtained a ventilating chamber, which kept the bees very quiet indeed.

Mr. Crawshaw said that bees would often fill the holes of the excluder zinc, but the tendency was very much reduced to put propolis outside the hive. It was possible that the reason the bees did not fill up the smaller hole was that it was big enough for them to insert the head, though not the thorax.

Mr. Reid held the view that a bee would not propolise any hole that would admit of more than its head. It was very difficult to criticise the apparatus in question without having tried it. It was rather complicated. He was not quite sure, although it might be a heresy, that bees liked ventilation at all, or indeed were any the better for it. It was certain that they did their best to stop any ventilation they could. He could understand this, for he had been sitting in a draught himself that evening, and felt the same sort of instinct that a bee probably did against such ventilation. He did not believe bees struggled so much towards the light as towards the air. He had observed his bees for the last nine or ten years during the winter, and if this was done quietly they did not go to the entrance. He thought it was open to doubt whether bees worked entirely by rays of light; his idea was that they possessed some sort of vision unknown to man. Bees would go in out of the sunshine; at any rate, he was quite sure that if they wanted to get out they would struggle round the little orifices whether they saw the light or not. However the invention was an ingenious one, and would afford the bees some little amusement, as there were plenty of places for them to propolise. He did not like the idea of a movable alighting-board, and he would warn any beginner not to start the apparatus, or he might possibly find that he lost more bees by it than through the dwindling which it was intended to remedy.

Colonel Walker said, in reference to the remark about bees clustering on the perforations in the chimneys, the author stated that bees did not show any disposition to cluster round them, provided the detention-chamber was of a reasonable size, and the chimneys were not close up to the wall on each side.

Mr. Crawshaw had been asked in the room that evening how the invention could be fitted to a hive with an existing porch. He suggested it should not be adopted until tried by experienced bee-keepers and found to be advantageous in this country. Mr. Reid's remarks that bees come under the influence of some rays which are outside man's senses were of great interest. Those "rays," if they existed, would undoubtedly pass through any such apparatus as that exhibited.

Mr. Weston, having read M. Goutte fangeas' book, thought the invention facilitated manipulation. In this country it was not necessary to keep the bees in the hive so much as it would be at the high altitude where the inventor lived. English winters were not so severe; but in spring-time, with the wind at 42 deg. blowing a gale, and sunshine at intervals, it was a distinct advantage to be able to shut up the hive; and the contrivance, if it could be adapted to ordinary hives, would, he thought, prove a great help to bee-keepers.

The Chairman said the method in question had been tried for three years with success, so that the inventor had had some experience. With regard to Mr. Reid's remarks, it was a fact that bees did not attempt to come out at night, but made use of daylight for that purpose; therefore, the inference that it was the light that attracted them out of the hive was perfectly legitimate. If it were only the air they wanted, then they would be induced to come out at night, which every one knew they did not do. He thought the plan of M. Gouttefangeas ought to be fairly tried. In the hands of a novice it would probably do more harm than good; but experienced bee-keepers should try it and guide the novices, and teach them how to use it. There were a good number of bee-keepers who could assist in that way, having the time and opportunity at their disposal. He (the Chairman) had been watching for years past all improvements made or suggested in the direction indicated by the apparatus before them, and he had seen none so feasible or simple as the present one. All the others had separate parts, which took to pieces, and had to be put away at certain times. M. Gouttefangeas' contrivance could be fixed to the hive and retained there all the year round. The tubes could be taken away if it was thought they impeded the progress of the bees; otherwise there was no addition to or interference with the hive. He hoped Mr. Taylor would be able to make the best of the invention for all ordinary purposes, so that it might be given a fair trial.

Mr. Belsham, while not attempting to criticise the invention, spoke in favour of the principle of it.

In reply to Mr. Bevan, who asked whether in the case of those who had

porches already it would be necessary to cut them away, the Chairman said that in many cases the porches could be adapted by simply removing the alighting-board and making a movable alighting-board; but that was a matter for the ingenuity of the manufacturers, and was purely a detail.

(Mr Sladen's paper on the "Swarthmore" Method of Queen-Rearing followed, and will appear next week.)

LEICESTERSHIRE B.K.A.

ANNUAL MEETING.

The twenty-third annual meeting of the above Association was held at the Oriental Café, Leicester, on March 4, when there was a large attendance.

In the unavoidable absence of Mr. A. P. Wakerley, J.P., Mr. H. M. Riley was voted to the chair, and among those present were:—Messrs. W. P. Meadows, H. Dilworth, J. E. Roper, W. Falkner, J. G. Payne, A. H. Peach, S. G. Godkin, W. Wesley, G. Levers, J. Fewkes, E. J. Underwood, W. Barrow, A. Brown, G. Munday, J. Thompson, G. Franklin (Warwickshire), A. Meadows, J. W. Dunn, J. Waterfield (hon. secretary), and others.

The annual report stated that the membership had increased, thirty-six new members having been enrolled, and the total now stands at 246. The annual exhibition of honey, etc., was held in connection with the Abbey Park Flower Show on August 2 and 3. Their thanks were due to the Parks Committee for their continuous support and excellent accommodation. The report and balance-sheet, which showed a sum of £5 5s. on hand, were adopted.

In proposing the re-election of the Duke of Rutland as President of the Association, the Chairman observed that his Grace was not merely a figure-head, but took a keen interest in the Association. When approached during the past year he very readily signed a petition in favour of the Foul Brood Bill, which they hoped soon to see presented to Parliament.

The motion was carried unanimously.

The Vice-presidents were re-elected.

The following were appointed on the Committee:—Messrs. S. Clark, T. H. Geary, H. Willey, J. Fewkes, J. G. Cotton, J. W. Smith, E. A. Jesson, G. Palmer, J. E. Roper, W. Ridley, G. Levers, S. G. Godkin, and W. K. Bedingfield.

Mr. H. M. Riley was re-elected hon. treasurer, Mr. E. J. Underwood hon. auditor, and Mr. John Waterfield hon. secretary.

Messrs. Meadows and Waterfield were re-elected representatives at the meetings of the B.B.K.A. in London.

The prizes were distributed, and the annual prize drawing resulted as follows:—First prize, frame-hive, Mr. C. de Trafford; second, honey ripener, Mr. Chandler; third, honey labels, Mr. J. Haywood.

The honey competition resulted as under:—Granulated honey: 1, A. Smith; 2, N. P. Laird; 3, J. Waterfield. Liquid honey: 1, A. Ward; 2, J. Waterfield; 3, H. Dilworth. It was decided to distribute the honey between the old people of the Union and the orphans in the Tosco Road Orphan Asylum.

During the evening an excellent musical entertainment was provided, and the proceedings closed with an interesting lecture illustrated by limelight views entitled "Work in the Apiary: including the Treatment of Foul Brood," by Mr. G. Franklin, first-class expert.—*(Communicated.)*

CUMBERLAND B.K.A.

ANNUAL MEETING.

The meetings were held at Brampton, Penrith, Whitehaven, and Keswick, on March 2, 7, 9, and 15 respectively. The Chairmen were Rev. Canon Rawnsley, Messrs. R. Heywood Thompson (High Sheriff), Hugh Jackson, C.C., and John Vicars (in the absence through illness of Mr. James Thomson) respectively.

The accounts showed an expenditure of £202 16s. 5d., and receipts, with County Council grants amounting to £100, fall short of the expenditure by £17 15s. 11d.

The 1904 report showed a membership of 542 (v., 371 in 1903), also non members visited 154, leaving 676 bee-keepers visited with technical instruction. Stocks manipulated, 2,115 (v., 1,562 in 1903); 12 per cent. found diseased (v., 19.75 per cent. in 1903). Thirty-four local hon. secretaries appointed. Messrs. G. W. Avery, Douglas Bouch, and J. G. Nicholson took their third-class certificates; Mr. G. W. Avery also his second-class. Two lectures and thirty-four bee tent demonstrations were given. Progress of the Bee-pest Bill was read out, showing that five County Councils had petitioned the Board of Agriculture, also three County Councils, whose sub-committees have considered the Bill. they are prepared to recommend their Councils to take action when the Bill is introduced into Parliament, and a County Council sub-committee which has resolved to request the Council to support the Bill. The hon. secretaries had been informed that thirteen County Councils in Ireland had petitioned the Irish Department of Agriculture.

The following resolution was passed unanimously at all four meetings:—

"This meeting is of the opinion that Mr. Saunders has the full support of the Cumberland B.K.A., and passes a vote of strong disapproval on the British B.K.A. for their regrettable attempts to put obstacles in the way of his earnest en-

deavours to get a 'Bee-pest Bill' passed as a Government measure."—GEORGE M. SAUNDERS, Hon. Secretary and Treasurer, Cumberland Bee-keepers' Association, March 25.

[We print the above *verbatim* as written by Mr. G. M. Saunders and forwarded by him for insertion in the B.B. JOURNAL. Having complied with his request, we are constrained to take the unusual course of reminding Mr. Saunders that if favoured with reports of future meetings of the Cumberland B.K.A., they must convey something more definite with regard to the attendance at the meetings dealt with.

This is done by others who send reports, and we can make no exceptions. The point is of especial importance when a resolution like the above is proposed, which is not only contrary to known facts, but gratuitously offensive in its terms. The "annual meetings" in question may, for all we know, have been attended by less than half a dozen persons, including the chairman and hon. secretary, and the "resolution" is undoubtedly that of Mr. Saunders himself. It therefore becomes important to know what the "passed unanimously" is worth. Nor should it be forgotten that the B.B.K.A. now have no connection with Mr. Saunders, or with any action he may choose to take with regard to foul brood legislation.—EDS.]

LINCOLNSHIRE B.K.A.

Supplementary to our notice of the annual meeting of the above Association last week, we are informed that the following resolution was proposed by Mr. H. J. Banks, seconded by Mr. R. C. Chapman, and carried unanimously:—"That this meeting fully approves of the action taken by their committee with regard to the Foul Brood Bill, and urges them to support any steps that can be taken to further the measure, which is urgently required." The Hon. Secretary was instructed to forward the same to the British B.K.A.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[5849.] The month of April came in with quite summer-like weather, and our bees were busy improving the shining hours. I took the chance to examine a few hives and found stores less plentiful than one could wish, especially in view of dearer sugar.

Railway Companies and Claims for Damage.—Our friend "White Clover" (5843, page 116) appraised the value of his three frames of comb at the good old price of 2s. per lb. These high values in claims have, I believe, done more than anything else to make the railway companies refuse to take honey in transit except at "owner's risk." During some twenty-five years, after thousands of consignments despatched per G.W. Railway, I have made three claims only, and in these I claimed no more than the market value at the time, and I will give the G.W.R. credit for prompt settlement at full amount claimed. As regards rates, my complaint is to have to pay full rate on what is, I believe, the highest scale, and yet be compelled to take "owner's risk." I am quite willing to take risk at last-named rate; indeed, I rarely send any but small parcels per passenger train; all over a dozen pounds goes by goods train, except show-lots, and these have perforce to go by passenger train to be in time for the show-bench.

Introducing Queens.—I have many times introduced queens—both virgin and mated—by using flour as a pacifier. When removing a queen from nucleus for a customer I introduce another at once, sprinkling the bees with a little flour, and also the queen, then dropping her in among the bees, or letting her run in between the frames, and in nearly every case they have been accepted. This is a great saving of time to the bee-keeper.

Feeding Bees.—At this season syrup-food only should be used in feeding except for out-apiaries difficult to reach, when good large cakes of soft candy (2 lb. to 3 lb. each) may be given with advantage in districts where the bees are unable to gather honey outside for present needs. But beyond this, bee-keepers must judge for themselves regarding the need of feeding after seeing the condition of the stores in the hives. On the other hand, if stores are short, do not run any risks, but feed at once, to prevent a check in extending the brood-nest. The honey-flow will be with us, in most parts, by first week in June, and to secure a goodly share we must have populous colonies for the ingathering and also for natural increase by swarming. There are those who consider that artificial swarms, or "shook swarms," as they are termed in America, are equal to natural swarms. Personally, I beg to differ on that point. Give me the natural swarm which issues when ready to establish themselves voluntarily

in a new home. The "artificial" article lacks the *rim* of the natural swarm, which latter make the profitable colonies for starting bee-keeping with, while they are far more safe than established stocks for setting up an apiary with; and, given a good season, will often outstrip stocks a year or two old. With regard to weak stocks in the apiary, they should be united by joining two together, and by this means get full, strong colonies by the first week in June. Then give them plenty of super room, and more surplus will be secured from one such colony than from three or four weaker ones. The giving super room in advance of the actual requirements of the colony will also retard swarming, and we know that unswarmed stocks are the chief sources of our honey-crop. I would also advise bee-keepers who produce both comb and extracted honey to work only the strongest colonies for comb-honey, and those not so strong for extracted honey, leaving them to fill shallow-frames of ready-built-out comb, but whenever possible have every colony strong.—W. Woodley, Beedon, Newbury.

QUEEN-REARING.

THE "SWARTHMORE" METHOD.

[5850.] Judged by the lack of comment on Mr. Hooker's interesting articles, the "Swarthmore" method would seem to have fallen somewhat flat on our conservative British bee-men. Following on the editorial notice of Mr. Pratt's book, there has, however, been an awakening of public interest in the subject, and quite a lot of people are in a hurry to read, mark, inwardly digest, and doubtless rush into the wholesale economic production of queens à la "Swarthmore." How easy, at swarming-time, to save all queen-cells. How simple to make up substantial nuclei for the royal embryo with a combed section and a spoonful of bees. And, finally, how profitable to dump these queens on the market at prices low enough to gratify the keenest searcher after cheapness.

Should the outcome be to place it in the power of amateur queen-rearers to flood the land with the products of their skill, we should be justified in regarding the new method as an "alien" of the most undesirable class.

Economy is all very well, but when secured at the expense of efficiency there can be no gain, but serious loss in the end. From the egg stage until the larvæ is sealed over, and again, from the moment of hatching until fit to take the mating flight, are critical periods in the evolution of a prolific queen. On the care, the fostering warmth, such as is ensured by a strong, healthy colony, depends the career of the future monarch. The attention given at this time makes all the difference between the ordinary rank and file and those wonderful prolific queens that we hear about, but do not possess quite so often as we should like.

Now, what help does the Swarthmore method give us towards the attainment of our ideal? After doing most commendably up to a certain point, Mr. Pratt, so to speak, goes altogether "off the rails." The queens, as hatched, must needs be shut up in cages with candy as their sole nourishment. Sugar candy indeed! As well expect infants brought up on tea and red herrings to be other than specimens of physical deterioration as that queens caged and sugar fed during an important stage of their growth should be equal to those reared in accordance with Nature's laws. Open up a hive containing an unmated queen. You do not find the royal inmate snoozing in a corner. No other occupant is so lively as the royal lady, enjoying herself before settling down to life's sober duties, while all around, fresh from the fields, there is the best of food, honey and pollen, each available, and each indispensable in building up the constitution that will later perform such wonders in egg production. What, then, are we to think of the misdirected ingenuity that would deprive the insect of its simple natural food, would shut up that youthful vigour, that exuberant vitality, within the narrow limits of a cage?

Right here, some one will say "Hold on! Mr. Pratt had a card up his sleeve to checkmate just such fault-finders as you." What about the alternative method of inserting a ripe cell or newly-hatched virgin in the mating-box? Won't that suit you? "Well, no, it won't." Suppose you have made a first-class job up to this point. Does it not seem rather risky to hand over the hitherto carefully tended queen to the tender mercy of a hungry section-box nucleus?

Bear in mind our queen is still immature, still susceptible to chill, and when we think on the vagaries of our climate there can be no comparison between baby-nuclei and a well-made, substantial nucleus. By the way, the nucleus of the average bee-keeper cannot, by any stretch of imagination, be termed substantial. The usual procedure is to remove two or three frames with hatching brood from a strong stock. These frames, with adhering bees, are placed in a nucleus hive, and a more or less ripe queen-cell pinned on. Of course, all the adult bees desert at once, and, should a cold "snap" come on before the hatching bees get

numerous enough to maintain the temperature, the young queen is pretty sure to be chilled.

I suppose this epistle of mine is open to the charge of being an indictment of existing and proposed methods, without offering anything to take their place. This is true. I have no cut-and-dried scheme to offer, and in the meantime merely make the following suggestions in the hope that some day they may bear fruit: For the production of high-class queens there is nothing to beat the confined nucleus method. With ripe cells on hand, a populous stock can be divided into five or six portions, and the hive entrances being packed for some days the bees are forcibly detained, and the hatching queens get the benefit of a high temperature and careful attention.

Of course, this scheme is both "wasteful" and "extravagant," but then the queens are bound to be good, and that is the main thing.

Well, now, suppose that instead of breaking up this strong stock into nuclei we allow it, as an unbroken whole, to give its undivided attention to the queens, right along from the egg stage until ready to meet the drone. *Then* the mating-box can be used without misgiving, and I believe that a compact section-box nucleus would be infinitely preferable to a badly made up one on standard frames.

To accomplish all this, to bring along a number of virgin queens in the one hive, each free to move about but detained from giving battle to each other, to keep a laying queen constantly in the hive to maintain the population and yet prevent swarming, all this may seem difficult, if not impossible. Time will tell.

Finally, I do not wish to be understood as condemning the "Swarthmore" system. If not fault free, neither is our present method of handling queens in nuclei, and although each is severally far removed from perfection, it may be that a compromise between the two will yet give best results and—queens.—J. M. E., Ussie Valley, Cononbridge, April 3.

BEE NOTES FROM CUMBERLAND.

[5851.] Since my last notes in February, we have had rather a long spell of stormy and cold weather, which, to the satisfaction of us northern bee-men, came to an end on the 18th. The week just ended has been a grand one for the bees, and remarably fine for March. On Wednesday (22nd), the temperature in the shade was 62 degrees, a point not reached here, in the last two seasons, until May. Stocks are very strong, and working well on the crocus, dandelion, and willow; they are also taking a quantity of pea-flour. Large numbers continually crowd round drinking fountains, and bees fanning at the entrances indicates rapid progress is being made.

Since reading in the JOURNAL the letters on "Bees and Hazel Catkins" I have kept a close watch on the hazel around my apiary, and although bees swarmed in artificial pollen boxes, not one, that I could see, settled on the catkins. Can it be that they only gather pollen from the hazel when no other kind is available?

As an indication of the wide-spread interest taken in bee-keeping in this county, I may mention that on visiting, by chance, a lovely cottage right in the heart of the mountains, miles from any other bee-keeper, I discovered in the garden four bee-hives. But alas! on examination at the request of the owner, the bees were found defunct. Foul brood, of which their master had never even heard, had brought to an end the existence of a race of bees which had dwelt there for more than half a century.—J. W. A., Lorton, Cockermouth, March 25.

BEE PEST LEGISLATION.

[5852.] In looking over the report of an expert's recent county tour, I observe that out of 433 apiaries comprising 1,489 stocks, no less than 77 apiaries are given as having between them 119 stocks affected with bee-pest. Where disease exists, it is generally found to extend through the greater part of the apiary, so that the total number of diseased stocks suggests an average of not more than about two stocks of bees in each of the 77 infected apiaries. In any case, these figures are, I think, sufficient to show that it is in the very small apiaries of inexpert bee-owners that bee-pest is, for the most part, to be found, and it is to deal with such cases as these that legislative powers are urgently required.

The large bee-keeper, however, inquires why, without any prospect of benefit to himself, he should be placed under a continuous liability of compulsory inspection and disturbance, because of the small apiaries to which I have just referred. Though the risk of disturbance may be more imaginary than real, still, I think the objection should be met, and considering that it is entirely against the interests of any large bee-keeper to tolerate the presence of bee-pest in his apiary, the question suggests itself, whether the inspection of large apiaries is necessary, and if it is necessary, whether it should not be made subject to special conditions. As an illustration, I venture to suggest

that any bee-keeper whose apiary comprises not less than, say, fifty stocks should, upon production of reasonable evidence of the generally healthy condition of his apiary, be able to obtain annually a certificate of exemption from liability to inspection.

Some such form of exemption should, I think, remove the only reasonable objection I have yet noted against the general scheme of the B.B.K.A. proposed legislation, and, considering the benefits already conferred upon the people and amongst animals by preventive legislation in regard to diseases, it seems to me to be too late in the day to argue that similar benefits are not possible as regards bees. —E. PERCY HINDE, Liverpool, March 30.

AN EXPLANATION.

[5853.] It will be fresh in the minds of the readers of your valuable paper that last year I advertised that I was giving up the bee-appliance business. Such was my intention at the time. Business demanded my going to Manchester, and I erroneously supposed that I could not carry on the two businesses together (building and bee-appliances).

But a year's experience here has disabused my mind on the subject, and I find that the two will work most harmoniously together.

If you, Messrs. Editors, will kindly permit this explanation to appear I should esteem it a great favour, as it will remove from the minds of your readers any misconception that may have arisen through my various advertisements.—W. SHEPHERD, Manchester (late of Oxton, Yorks), March 27.

REVIEWS.

Harmsworth Encyclopædia. — Part I. Pp. 160. Published by the Amalgamated Press, Limited, and Thomas Nelson and Sons, London. Price 7d.

It is not everyone who can afford to get an Encyclopædia Britannica, but here we have an entirely new encyclopædia at a reasonable price, bringing it within the reach of all. In view of the number of pages in each part, it is a marvel of cheapness, for it is well put up; the printing is good, and the numerous illustrations remarkably clear. It is to be completed in eight volumes, and is issued in fortnightly parts at 7d. each; one halfpenny a day, the cost of a daily paper; the total cost will not exceed 24s., and for this there will be no less than 6,400 pages and 50,000 entries. The publishers claim that it differs from all other encyclopædias, and while classical and antiquarian subjects are not neglected, a great feature is that it keeps in view subjects of peculiar everyday interest, such as modern industries, biographies of living persons, recent developments of science, and the progress of modern invention. The articles are unsigned, and the encyclopædia rests upon its own merits, which, from the part before us, are very considerable. There is an abundance of illustrations, and the maps are of an attractive and useful character. For instance, there are several maps of Africa, one, by different colours, showing the vegetation of the country; another, by various shadings, the different races; also another, the colonisability, mean temperatures, and rainfall. In all, there are nine such maps and two of them are coloured. The project is an excellent one, and if the work continues as good to the end as it is in the first two parts, it will be a valuable addition to any one's library, as it is a book that every one needs.

Le Livre de l'Apiculteur Belge. By Desiré Halleux. New edition, large 8vo. Published by the author, Spa, Belgium. Price 2 f. 50 c. (2s.)

Here we have a manual by a well-known Belgian bee-keeper, who is the President of the Bee-keepers' Federation of Condroy and Heshaye, as well as the director of the Ecole Mayenne, at Spa. The volume contains 383 pages and is profusely illustrated with 138 figures. It treats of the natural history of the honey-bee, and as the author is a practical bee-keeper, practical work in the apiary is thoroughly gone into and explained. When we mention that the book is nine by six inches, it will be seen that it is a marvel of cheapness, and for two shillings is the cheapest bee-book that we know about. We, therefore, recommend it to those knowing the French language.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

March, 1905.

Rainfall, 5·15 in.
Heaviest fall, ·78 on 10th.
Rain fell on 21 days.
Above average, 3·13 in.
Sunshine, 156·7 hours.
Brightest day 22nd, 10·8 hours.
Sunless days, 3.
Above average, 12·3 hours.
Maximum temperature, 59° on 21st.
Minimum temperature, 26° on 1st.
Minimum on grass 23° on 1st.
Frosty nights, 4.
Mean maximum, 50·8.
Mean minimum, 38·1.
Mean temperature, 44·4.
Above average, 3·1.
Maximum barometer, 30·32 on 4th.
Minimum barometer, 28·93 on 15th.

L. B. BIRKETT.

MARCH RAINFALL.

Brilley,

Herefordshire.

Height above sea, 590 ft.

Rainfall, 4.24.

Greatest fall in twenty-four hours, .48 on the 10th.

Rain fell on twenty-two days.

Queries and Replies.

[3703.] *Bees Wintering Badly. — The Braula Cœca.*—I should be much obliged for a little advice regarding one of my hives. I only started bee-keeping last season and am therefore ignorant of many things concerning it. The hive in question sent out two strong swarms last June, which left the colony in a weak state. I took no honey away, but gave the bees during September four pints of syrup and packed all down for winter early in October. On examining the hive a few days ago, I found all the eight frames of comb mouldy and mildewed in patches, and so I ask:—1. What do you advise me to do? There are only enough bees to cover two frames, and many of the uncapped cells contain a thick dark-brown substance. 2. What is this, and how do you account for it? 3. On the backs of most of the bees there is a tiny insect of a reddish colour. Never having read or heard anything about these insects, I would like to know what they are. I send name, etc., and sign—J. E. B., Purley, Surrey, March 21.

REPLY.—1. You should first ascertain if there is a queen in the hive, because, if queenless, the bees are hardly worth saving as a separate colony, and should therefore be united to another stock. 2. The "dark-brown substance," so named, is doubtless pollen that has had a thin covering of honey or syrup, the latter being consumed as food by the bees during the winter. 3. The insect mentioned is a parasite known as the "Braula cœca," or blind louse. It is fully described and illustrated on page 160 of the "Guide Book," which work you should certainly possess in order to understand bees properly and make a success of bee-keeping.

[3704.] *Re-queening Weak Stocks in Spring.*—I am always much interested in the "Query and Reply" column of our valuable journal, and generally find that some other bee-keeper has already asked just what I want to know. In making my spring examination last Wednesday, I found breeding well advanced in most of the hives, but some others were less satisfactory. All, however, had plenty of food, but two colonies on stands some distance apart proved queenless. I have one young queen now laying nicely in a nucleus hive, and this lot I intend joining to the stronger of the queenless ones. The nucleus is now being gradually brought closer to the latter stock, and I intend uniting them as per instructions in "Guide Book," and so I ask:—1. Had I better cage the queen for twenty-four hours to ensure her safety? The other stock is weaker, and stands between two strong colonies with 1904 queens. In the "Guide Book" (page 134) reference is made to "improving the race by introducing new blood" (Italian). The same race of bees has been in my apiary for many years, as I find the Black bee suitable for our locality, a good honey-gatherer, and fairly well tempered. 2. Would you advise me to take advantage of this opportunity and introduce an Italian queen to this colony? I am one of those who has taken your advice (often given) to "make haste slowly," and "let well alone." Some standard frames of comb which I used in doubling last season were heavily laden with pollen when I stored them for the winter, and I find that by now the pollen has got hard and dry. Would these combs be any good for future use if I removed the pollen by destroying the walls of the cells, but leaving the midrib undamaged? Apologising for trespassing so much on your space and patience I enclose card and sign myself — A FLINTSHIRE READER, March 25.

REPLY.—1. Yes, it is better and safer to cage the queen as proposed. 2. We should certainly not advise you to incur the cost of an expensive Italian queen for joining to a "weak lot" of bees. We should prefer re-queening the stock with a virgin queen, costing, say, 2s. 6d., and let her build the colony up in time for wintering. You could hardly expect surplus from such a stock this year.

[3705.] *Pollen-clogged Combs.*—I have been a reader of the B.B.J. about eighteen months, and have also Cowan's "Guide Book," but cannot find what I want to know in either. On examining my hives on Thursday last, I noticed in the combs a lot of pollen collected last autumn. I therefore ask:—1. Is this utilised by bees in breeding at the present time? Some of the frames appeared to be full of it, and as bees are now carrying in fresh pollen freely, and the centre combs are nearly full of sealed brood, while there is also plenty of food in the hive, I therefore ask:—2. Is it right to let all this superfluous old pollen remain, or how can I clear it out to allow of the combs being again used for brood? I also notice on outside combs about an inch square of cells con-

taining what looks like dry pollen-dust and some small insect working on it. 3. Is this injurious to bees, or is it connected with foul brood? An answer to the above in your B.B.J. will oblige.—NOVICE, Charfield, Glos., March 25.

REPLY.—1 and 2. It is plainly evident that the combs referred to are pollen-clogged, and, consequently, useless for breeding in, or, indeed, for any purpose. Plans have been devised for removing the pollen from the clogged cells, but we have found them so troublesome as to make us prefer burning the combs and having new ones built from full sheets of foundation. Anyway, the combs so filled are worse than useless. 3. The insects seen are "pollen mites." They are very similar to the well-known cheese mite, and if the combs complained of could all be infested with the mites they would reduce the pollen to a dust-like consistency, and it might then be shaken from the cells. But burning is the simplest method of getting rid of the nuisance.

[3706.] *Queen Cast Out Dead in March.*—Enclosed is what I think is a queen bee. It was cast out of one of my hives this afternoon. I have looked into the hive and find brood in all stages, both capped and otherwise. Can you explain the matter, or say what is the cause of death? I may say there has been "robbing" going on for the past few days. Is there any means of stopping this trouble? I send name, etc., and sign—HUDD, March 22.

REPLY.—The dead queen sent bears unmistakable signs of having been "balled" and killed before being cast out of hive. You had better search well and find if there is still a queen in the hive, and if found—or if eggs are seen—all will be right, and you may conclude that the dead queen is from some other stock, and has been "balled" on entering the hive in question. On the other hand, if neither queen nor eggs are found, the dead queen will no doubt have been "balled" by her own bees, consequent on the excitement caused by the robbing. The latter is the most probable cause of the mischief.

[3707.] *A Beginner's Queries on Transferring, etc.*—I only began bee-keeping last June, but, thanks to your JOURNAL and the "Guide Book," I have learnt a lot, yet still desire to know more. I bought a hive from Lee and Son, and left it to a bee-keeper to supply the bees. They were rather a weak lot, as I afterwards found out; still, by following directions in "Guide Book," I have them now on seven frames with brood on four of them, and they now seem to be doing well. A week ago I bought a stock of bees, or a skep of bees inside a frame-hive, the skep being on the floorboard. I have not examined them, but they seem a strong lot, and judging by the quantity of pollen they carry in, I should think there is plenty of brood being reared. I wish very much to get the bees on to frames, as I have a hive all cleaned and ready standing the side of the skep, so I ask: — 1. Do I lift the skep from its present floorboard and place it on the top-bars of the frame-hive, with a piece of drugget over the frames with a hole cut the size of skep? Also—2. Do I put an excluder over frames when the queen starts to lay in the combs below? 3. Is the present the best time to operate if weather is warm? I also bought a frame-hive with bees supposed to be on five frames. I examined them to-day, but found bees only on the two frames under candy. The five frames all have drawn-out combs, but empty, and not a sign of brood in them. Not being experienced, I could not find the queen. I therefore ask:—4. Would it be possible for there to be a queen in the hive and no brood at this time of year? 5. If the stock is queenless, could I by getting a fertile queen and feeding on syrup make this into a strong stock by the time of honey-flow? I send name for reference. —H. F. G., Herts, March 24.

REPLY.—1 and 2. You cannot improve on the very explicit and full directions given on page 141 of "Guide Book." 3. The best time is when the skep is seen to be pretty full of bees, in addition to weather being favourable. 4. It is quite natural to find no brood in March if there are bees on only two of the combs. 5. If the stock has been queenless for some considerable time—as is very probable—the bees will, no doubt, be old, worn-out, and almost worthless. A young and prolific queen would, therefore, get no chance of building up the stock quickly for want of nurse-bees and lack of warmth in the hive. In other words, a queenless lot of bees covering only two frames at end of March is practically worthless. We should try to secure a nucleus colony — headed by a young, vigorous queen—and add them to the queenless lot.

[3708.] *A Beginner's Difficulties.*—Having only lately started bee-keeping, I find myself checked at the beginning by the fact that the hive I bought a month ago proves to be almost tenantless. There are perhaps a couple of hundred bees in it, and only empty comb filled here and there with mildew. Some hundred or so of dead bees were found outside the hive a fortnight ago. I cannot tell for myself if it is simply starvation or whether foul brood is present, there being no brood at all so far as I can make out, and only one or two eggs—no queen. 1. I should therefore be glad of your opinion what to

do for the best? 2. As I am anxious to join the Bee-keepers' Association I should be glad if you can furnish me with the address of the Secretary of the Surrey B.K.A.—"A SURREY BEE-KEEPER."

REPLY.—We regret your bad luck, which is very discouraging for a beginner. There is, however, no hope of your doing any good with the stock now so hopelessly weak in bees and probably queenless. 2. The Hon. Secretary of the Surrey B.K.A. is Mr. F. B. White, Marden House, Redhill, and that gentleman will no doubt put you in the right way for beginning with a new stock if you become a member.

[3709.] *Drone-Breeding Queens.*—March 25 being a nice bright day, I took the opportunity of examining my stocks, and found nice batches of sealed brood in every hive but two, and it is with regard to those that I am writing to you. One of these, I found, contained drones, some being on the wing. I also saw only drone-brood. I therefore conclude that the queen is a drone-breeder. But the strange part of the case is the fact that this stock was a "cast" that came off last year from a very strong hive, and I know the queen was fertilised and all right last season, the stock being particularly strong in normal worker-brood, and in view of this expected great things this year from it, and now the queen has become a drone-breeder. I therefore ask: 1. Can you offer any explanation of what is to me a mystery.

The other hive mentioned I first looked at in February, and found that food was getting short, so gave a cake of candy, but when examined again on March 26, the bees were found to be dead, apparently through starvation, as most of them lay head foremost in the cells, and those that were lying about all had their tongues out. The stock never had done well, and I intended superseding the queen this year, but after looking thoroughly for her among the dead bees, she was nowhere to be found. They also had about two pounds of sealed honey on four frames, and some freshly gathered honey and pollen. 2. Can you explain why they should die, apparently of starvation, when they had sealed stores, and a cake of candy untouched? The candy was the same as that given to every other stock, and found all right.—G. T. W., Wimbledon, March 28.

REPLY.—1. The natural inference is that the young fertile queen of last year has met with a fatal mishap, or got outside the hive and been lost in the autumn, and that the bees have raised a successor when there would be no drones about for mating with her. 2. The symptoms described clearly point to death from want of food. It is quite common for weak stocks of bees to perish in very cold weather, with food almost within reach.

[3710.] *Home-made Feeders.* — 1. In "Modern Bee-keeping" — under heading "Feeders"—a syrup-tin with a few holes bored in sunk lid is recommended for *rapid* feeding. Would it do equally well for *spring* or *stimulative* feeding, if there were only two or three small holes? 2. Is there any reason why holes should not be in bottom instead of in lid, as syrup could then be given without removing feeder from hive, which would save time and trouble? 3. Would the tin be likely to have any bad effect on medicated syrup? I send name, and sign—SUFFOLK, Nayland, March 18.

REPLY.—1. A syrup tin with a few holes in sunk lid does not, to our mind, constitute an efficient rapid feeder. It will do, however, for stimulating in spring. 2. The holes must be in sunk lid, as recommended, to form a bee-space on under side of feeder. 3. Feeders made with a loose top are faulty in action, because of syrup escaping through pressure of air above.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

F. M. (Devon).—Carniolan Queens.—We cannot say if the queen-rearing business of the late M. Ambrosic, Moistrana, Austria, is still carried on. You had better write to the old address for information, as it is very unlikely so old and large a business would not be kept going.

D. JANSON (Hants).—Joining B.K. Association.—The hon. sec. of the Hants and Isle of Wight B.K.A. is Mr. F. H. Bellairs, Bransgore, Christchurch.

J. T. (Somerset). — Price of Heather Honey. — The price mentioned by "D. M. M., Banff," in his article, on page 102 of B.B.J. for March 16, was for heather honey gathered in the Scottish Highlands, and this usually brings a high price. We cannot inform you where similar prices could be obtained for heather honey gathered in Somersetshire.

Suspected Combs.

"RUTLAND" (Wing).—Foul brood is developing in several cells of comb sent.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

THE "BEE-PEST" BILL.

BEE-KEEPERS' ASSOCIATIONS AND COUNTY COUNCILS.

The following correspondence is instructive as illustrating the need for prompt action by the B.B.K.A. Council in order to enable hon. secs. of county associations to deal with communications from County Councils without asking advice from any one (ourselves included). On the other hand, we think it desirable that the committee should now circularise County Councils in order to make it clear that the whole matter was taken out of Mr. Saunders's hands, as he is acting without the committee's authority.

In publishing the correspondence below, names, etc., are omitted for obvious reasons. The first letter is from the hon. sec. of a county B.K.A., and reads as follows:—

(————) Bee-keepers' Association.
April 6, 1905.

"BEE-PEST."

DEAR SIRS,—I have received the enclosed letter from the —— County Council *re* above; also copy of a draft Bill and circular "No. 11" from Mr. Saunders. My view is that all this is unauthorised and out of order. It does not appear to me that Mr. Saunders is right in his action, and I propose to reply to the County Council to that effect; but I will be glad of advice as to the course we ought to take with regard to legislation. Kindly return papers and oblige —Yours faithfully,

(————), Hon. Sec.

The above-mentioned letter, as enclosed, reads as under:—

County Education Offices,
(————),
April 3, 1905.

DEAR SIR,—I herewith send you a draft of a Bill for the better prevention of the bee-pest, together with leaflets upon the subject itself, and should be glad to receive the observations of your association thereon in due course.—Yours truly,

(————), Clerk.

In response to the request of the hon. sec. of the association in question for advice, our Senior Editor wrote a full reply, which is printed below:—

10, Buckingham Street,
Strand, London,
April 10, 1905.

DEAR SIR,—Replying to your letter of April 6, in which I am asked to advise you in the course the (——) B.K.A. should take with regard to the letter from the (——) County Council, I may say that, at a specially-called meeting of the representatives of the Bee Associations affiliated to the B.B.K.A., held in London on October 6 last, the question of promoting a Bill was placed in the hands of a committee, and the following resolution was passed unanimously:—"That the Council of the B.B.K.A. form the committee, with power to add to its numbers."

Mr. G. M. Saunders and several others were added to the committee at the time, and arrangements were made for holding meetings with the object of forwarding the work. The committee requested Mr. Saunders to issue no more circulars without its authority, and to forward the correspondence in his hands in order to ascertain what had been done. This he refused to do, thus obstructing the work for which the committee was appointed. As the latter body could not agree with Mr. Saunders, or approve of his methods, he retired from the committee, and has since issued at intervals separate misleading circulars, numbered 6 to 11 inclusive, without any authority for so doing.

You will thus see that he is in no way connected with the B.B.K.A., who are now doing all that is necessary. Not only so, but the committee can only view Mr. Saunders's interference as doing harm rather than good to the cause they are striving to promote.

Most of the bee-keepers' associations have supplied the committee with the information required, and they approve of the action of the B.B.K.A. as apart from that of Mr. Saunders, whose proceedings are regarded by them as out of order and unjustifiable. I enclose marked copies of the BEE JOURNAL, which contain all the information the County Council will require. —Yours faithfully,

THOS WM. COWAN.

(——), Esq.,
Hon. Secretary,
(——) Bee-keepers' Association.

We need add nothing to the above reply, as it affords a fairly clear view of the whole case and renders further comment on our part unnecessary.

MR. COWAN'S TOUR IN AMERICA.

Our Senior Editor left by the Cunard s.s. Saxonia on Tuesday last, the 11th inst., for an extended tour on the American continent.

After visiting Chicago, Mr. Cowan purposes journeying on to California, and will stay some time at his residence there, "Pinehurst," Pacific Grove, which is the furthest point of his intended journey. On

his way back he will call at Philadelphia to see Mr. J. M. Hooker, and after leaving there visit Canada and British Columbia, returning to England probably at the end of the year.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(*Continued from page* 133.)

Mr. Sladen: I have been asked to open a discussion on what are known as the "Swarthmore" methods of queen-rearing, introduced by Mr. E. L. Pratt, of Swarthmore, near the city of Philadelphia, in the United States. Many here present will remember that these methods were described somewhat fully by Mr. John M. Hooker in the BRITISH BEE JOURNAL in September, 1903. The following is an outline of the "Swarthmore" process of queen-rearing. The queen-cells are built in little cups of wood, the cups being first filled with wax, in which, when warmed, a round hollow is stamped by means of a moistened die. Young larvæ are then put into the cups, and are given to queenless and broodless bees which have been confined a few hours, and these will at once supply the larvæ with a quantity of royal jelly—i.e., chyle food—and commence drawing out the cups into queen-cells. After the larvæ have been a few hours with these bees they are placed in a small cage of queen-excluding zinc in the upper part of one of the brood-combs of a strong colony containing an ordinary fertile queen, where the feeding of the larvæ is completed. The middle of the top-bar of the frame holding this cage is cut away to receive the cage, and the top of the cage is level with the remaining ends of the top-bar. The top of the cage (as you will see) is bored with holes to receive the wooden cups containing the larvæ, and the cups are flanged for easy removal and to prevent their falling through into the cage. Thus the queen-cells are held in what corresponds to the top-bar of the frame, and they can be inserted and withdrawn singly through a slit in the quilt without disturbing the bees.

Pratt has done a good service to queen-rearing by introducing queen-cells mounted in wooden cups, as these can be used over and over again, and this is a great advantage. Several other forms of wooden cups have since been introduced by G. W. Phillips and others; and, on the whole, I rather prefer one which is narrower and has thinner walls than Pratt's, and which only requires to be immersed in melted beeswax, chiefly because, when it is inserted in a protector or introducing cage between the combs of a nucleus, they (the combs) are not so widely separated as they are with a wide cup.

In July and August last year I carefully compared Pratt's method* of rearing the queens in a small cage in the top of a brood-comb with the latest form of Doolittle's method of rearing them four or five inches from the top between combs of brood separated from the compartment containing the queen by a partition of queen-excluding zinc, by rearing queens by both methods at the same time in the same hive during a honey-flow, and again in another hive after the honey-flow, in my apiary. In both experiments Pratt's cage was placed in the top of the central comb of the brood-nest. I found that the pupæ in it were smaller, and weighed less than those reared by the Doolittle method. The queen-cells by the Doolittle method were large, broad, and pitted all over like good specimens of queen-cells produced naturally under the swarming impulse, while those in Pratt's cage were smaller and narrower, and their walls and cappings were thin and comparatively smooth. The amount of food left in the cells after feeding ceased was less in Pratt's cage, and as the pupæ developed into queens it did not grow hard so quickly.

I believe that these results were chiefly caused by the excluding zinc, by which the queen-cells were closely surrounded, preventing the nurse-bees attending to the queen-cells and feeding the larvæ sufficiently, and also to some extent by the queen-cells being placed in the top of the brood-combs, the whole of the upper halves of which were outside the brood-nest (as they always are during the middle and latter part of the queen-rearing season, especially when there is no super on the hive), and were filled with honey, so that a larger proportion of field-bees and a smaller one of nurse-bees were probably surrounding the queen-cells than if they had been in the brood-nest, and in cool weather the queen-cells, being separated from the brood-nest, would be liable to be chilled.

As the production of well-developed queens is of the first importance, I prefer the form of Doolittle's method above mentioned, and it is not more laborious; on the contrary, it is less so, for giving the queen-cups first to specially-obtained queenless and broodless bees is unnecessary. I find they can be given direct to the queen-rearing compartment of the colonyin which they are to be finished, and, if this compartment contains only old brood, they will be accepted satisfactorily here by confining the

* I used the cage illustrated in the BRITISH BEE JOURNAL in September, 1903, and over half the cage substituted queen-excluding zinc for the wire-cloth on one side.—F. W. L. S.

bees in the compartment for a few hours through the insertion of a wire-cloth partition as by specially-obtained bees. Queens should always be reared inside the brood-nest between combs of brood, and the nurse-bees should have free access to the queen-cells.

I will conclude this paper by saying a few words on the "Swarthmore" method of fertilising queens. This is done by placthem in small nuclei in small fertilising-boxes containing very small combs. Special small frames for nuclei have been employed with success by a few queen-breeders for many years, but Pratt uses still smaller ones—for instance, ordinary section-boxes with only about one or two hundred bees, and he even goes so far as to say that "ten workers, possessed of pluck, will cause a queen to fly and mate as readily as will a thousand" (from "Baby Nuclei"). The sizes of comb recommended by Pratt are such that four, six, or eight of them will fill a standard American frame.

At first small fertilising-boxes were condemned by nearly all experienced queen-breeders, and most of those that tried them reported failure; but lately the methods of forming and managing the nuclei in these boxes, thanks chiefly to Pratt's efforts, have been so much improved that several large queen-breeders in America have succeeded in fertilising queens on a large scale from these boxes. There is no doubt that in very favourable weather and with good management only a very few bees are necessary to secure the fertilisation of a queen. On account of the summer climate of England being cooler, more windy, and more cloudy than that of the United States, the period between the hatching and fertilisation of a queen is, on the average, a good deal longer in England than in the United States, and a larger number of bees are necessary. This fact, and the fact that the British standard brood-frame is smaller than the American, makes it, I think, clear that, whatever benefit there is in employing special small combs for nuclei, we must not expect it to be so great in this country as it is in America. There are, I believe very few bee-keepers in this country—possibly none, even amongst professional queen-breeders—who do not desire increased populations of bees as well as queens, and this is very necessary in our short seasons. One of the drawbacks of nuclei in section-boxes is that they are practically useless for rearing many bees, while in full-sized combs directly a queen is fertilised a large quantity of brood is produced even in comparatively weak nuclei. With a nucleus on full-sized combs frames of brood can be easily exchanged with (given to, or taken from) ordinary colonies—an important facility—and the nucleus can, if desired, be built up into a colony by adding frames, and there is not the trouble and risk of removing the queen and introducing her to another hive. Besides, quite small nuclei can be kept on two British standard frames, or even on one. Another advantage of full-sized combs is that the nuclei are not so liable to run short of food, and so they require less attention.

Several reports have recently been given in the BRITISH BEE JOURNAL of Pratt's fertilising-boxes having worked successfully in England. The question, I think, for the practical British bee-keeper is not whether it is possible to get queens fertilised in small nuclei on small combs, but whether the average results obtained from them makes their employment advantageous. It is a question that must be settled by experiment. I think that in some favourable localities in the South of England special small combs may be of value; but that in many localities in England, and in Scotland and Ireland, the climate is hardly favourable enough.

As the knowledge of how to manage these "baby" nuclei, as they are now called in America, increases, the results with them should improve. A number of prominent American bee-keepers are now experimenting with them. It seems that the "baby" nuclei can often be examined without smoke, and it is advisable to do this, because smoke attracts robber-bees.

A very valuable point which, although long known, has been brought to the front in the recent study of nuclei, is that a virgin queen, even several days old, is readily accepted four to six hours after the nucleus has been formed, provided that there is no brood in its combs. If the conditions are favourable, the queens in these broodless nuclei will be fertilised all right, the condition of these nuclei being very similar to that of small second swarms, or casts.

Several American queen-breeders now carry the nuclei, soon after they are formed, to a spot sufficiently far from the apiary to prevent any of the bees returning to their old hives. This is a valuable wrinkle for British queen-breeders, as, when left in the apiary, some of the bees will often return even after a whole day's confinement. (The Claustral apparatus might be of value for accomplishing the same object.)

(*Conclusion of Report next week.*)

CHESHIRE B.K.A.

ANNUAL MEETING.

The annual general meeting was held at Clemence's Café, Chester, on March 22, the Rev. T. J. Evans in the chair. Among those present were the Revs. E. Charley and W. Rowley, Messrs.

F. Benyon, J. Lyon Denson, Hubert Potts, Fred. Wilkinson, Wm. Cartwright, Job Astbury, W. H. Forde, J. A. Bally, and R. S. Linnell (assistant secretary). The hon. treasurer announced that financially the year had been a success. The Duke of Westminster was unanimously re-elected president, and the vice-presidents were re-elected, with the addition of Lord Stanley of Alderley. Messrs. J. Young, J. Johnson, and A. Newstead were elected on the committee. The hon. treasurer, Mr. T. D. Schofield, and the hon. secretary, Rev. E. Charley, were re-elected unanimously. It was agreed that the Cheshire Bee-keepers' Association ask for a division of the joint library they hold with the Lancashire Bee-keepers' Association in order to start a library of their own, and that a small sum be granted annually for its maintenance, if necessary; this library to be at the assistant secretary's (R. S. Linnell) office, Grosvenor Chambers, Chester, and Mr. R. S. Linnell was appointed hon. librarian. The Revs. T. J. Evans and E. Charley and Mr. T. Johnson were elected lecturers; Mr. John Tonge (auditor), Messrs. T. D. Schofield and E. P. Hinde (delegates to meetings of the B.B.K.A), were re-elected.

It was resolved "that this association is entirely in accord with the principles of the 'Foul Brood' Bill as drafted by the British Bee-keepers' Association, and hope that in the interest of bee-keepers it will soon become law."—E. CHARLEY, Hon. Sec.

ESSEX AND SUFFOLK B.K.A.

ANNUAL MEETING.

The twenty-sixth annual general meeting of the above association was held at the Devonshire House Hotel, Bishopsgate, London, on Wednesday, March 29, at 5.30 p.m. Mr. C. B. Snelling, of Chelmsford, took the chair. There was a good number of members present, including Dr. T. S. Elliot, Mrs. Ford, and Messrs. W. J. Sheppard (retiring secretary), W. O. Scoggins, C. D. Faunch, C. H. Bocock, A. W. Salmon, T. W. White, E. H. Dearden, E. J. Stone, W. P. Jobson, G. R. Alder, and others.

The report and balance-sheet for 1904 were passed.

At the election of officers, the Countess of Warwick was re-elected president, and Rev. E. Bartrum, D.D., Sir T. Fowell Buxton, Bart., C. N. Brooks, Esq., Miss Courage, Colonel Davis, Bishop of Colchester, C. F. Harding, Esq., Owen Parry, Esq., J. H. Tritton, Esq., Miss Willmot, and Hon. Miss R. Hanbury were re-elected vice-presidents. The following were elected to serve on the committee:—Mrs. Ford, Messrs. J. Chesson, Bruce-Cook, A. H. Dearden, C. B. Snelling, J. R. Pulham, F. G. Kimber, O. Puck, A. W. Salmon, T. W. White, W. J. Sheppard, and Dr. T. S. Elliot.

The meeting expressed great regret at losing Mr. W. J. Sheppard's valuable services as secretary, and the heartiest thanks of the association were voted him on his retirement. Mr. G. R. Alder, of Raworth, was elected in his place.

A hearty vote of thanks was also tendered to Mr. A. W. Salmon for his services as expert in the county of Suffolk.

The meeting discussed the Foul Brood Bill, and although unanimously in favour of legislation, were by no means certain that the Bill in its present form would benefit bee-keepers generally, and, on the motion of Mr. C. H. Bocock, of Newmarket, the following resolution (which was seconded by Mr. T. W. White) was carried by a large majority:—"The Essex and Suffolk Bee-keepers' Association, whilst recognising the desirability of legislation on some points in regard to foul brood, strongly disapproves of the Bill in its present form, but would prefer systematic education on the subject by means of the County Councils."

A vote of thanks to the chairman for presiding brought the meeting to a close.—G. R. ALDER, Secretary and Treasurer.

CUMBERLAND B.K.A.

ANNUAL MEETINGS.

[Referring to the report, on page 133 last week, of the annual meetings of the above Association—and the comment thereon in our editorial footnote on page 134—the hon. sec., Mr. G. M. Saunders, in a somewhat lengthy letter—which we need not print because of its having no direct bearing on the issue—after giving names of the respective chairmen, reported on page 133, informs us that there were also present:—The Revs. D. R. Jones and Wm. Roberts, Dr. Arnott, Miss E. M. Thompson, Miss M. E. Thompson, Miss Saunders, Messrs. Jno. Atkinson, G. W. Avery, Thos. Bulman, Robt. Birkett, Douglas Bouch, Thos. Carey, Thos. Couch, A. Mitchell-Dawson Thos. Errington, J. W. E. Gibson, Wm. James, J. W. Leigh, Isaac Mossop, Jno. Martin, J. G. Nicholson, J. Rushton, J. R. Tiffen, Wm. Titterington, Jos. Wilson, and J. Williamson.

It would have been more satisfactory had Mr. Saunders stated the names of those present at each of the four meetings, but as the names given above total 26, it will be seen that the average attendance was less than eight persons, including the chairman and hon. secretary. Further comment is unnecessary.—EDS.]

(Several Reports of County B.K.A. Meetings are in type but held over till next week owing to pressure on our space.)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

LOOKING BACK: OR, A HUNDRED YEARS AGO.

[5854.] It may be both profitable and instructive to take a retrospective view of bee-keeping at the opening of the last century. Simple kaleidoscopic glances must suffice, as the field is a wide one, and I select the work of Robert Huish as the basis of my theme, because he was somewhat of a cosmopolitan, half Englishman, half Scotch, and was well up in the various systems of all foreign countries—being a Fellow of various societies, hon. member of several others, and corresponding member of many more.

In regard to the hive—after reviewing those of White (collateral); Morley (hexagonal, with straw or glass super); Huber (leaf observatory); Mme. Vicat (collateral boxes); Ducouédic and Gelien (an adaptation of the hive recommended by Bonnar, and known to French apiarians as "La ruche Ecossaise," or the "Scotch hive"); Lombard (round straw with caps for supering)—Huish (like Bonnar) is convinced that there is no material *more proper than straw*. His hive appears to me an adaptation of a Grecian hive in use about the closing years of the eighteenth century. It was wider at the top than the bottom, had nine fixed top-bars, and his surplus was gathered from the side combs, which he could extract at pleasure. He pleads that this hive was a non-swarming one, as, without touching bees or brood, he could work *ad lib.* to hinder all clustering out; and, secondly, the whole interior was open for inspection at any time. I thing the choice of such a hive is worth noting, and that, too, by such a cosmopolitan apiarian as Huish, after twenty years of bee-keeping, and correspondence with the most skilful apiarians of France, Germany, and Scotland — acknowledged to be the best bee-keepers of the time—and finally the "perusal of all the ancient and modern works which have appeared on bees, few of which have escaped me."

It may prove interesting to note what he says of the various denizens of this hive:—The queen, or mother-bee, holds the first rank in the colony. She is the mother of all the young queens, drones, and working bees; in fine, of the whole family, who emigrate from an old hive to create a new establishment, and to form for themselves a colony in another place. She is of a wonderful intelligence, and is endowed by Nature with the instinct of knowing the proper cell in which to deposit her eggs. She needs no coition, for the drones do all the further duty required by entering the cell and emitting the seminal fluid which fecundates the egg. And this after the discoveries of Reaumur, Huber, etc.! Perhaps to accommodate this theory, he contends that eggs laid in the fall can be hatched in the ensuing spring waiting to be fecundated by the drones then raised. Nay, he even contends that in a hive where the bees have died out a future colony may be "resurrected" from these eggs. Of the workers he has nothing to say but praise and commendation. The degree of their irascibility, he considers, depends on the amount of brood in the hive, thereby taking a diametrically opposite stand to that taken by an eminent modern writer whose opinion I dealt with lately. He also considers, on the strength of twenty years' bee-keeping, that bee-men acquire no immunity from the consequences of their ire, wherein few moderns will agree with him. The little pellets of farina he considered crude wax, or the elementary parts from which by a particular process in the stomach of the bee wax was evolved, and he even declared that experiments could be made to prove that the farina of the stamens contains the principles of wax. Propolis is also similar in its constitution, but differing in its fabrication, the chief element being the farina of plants; and with regard to Huber's discoveries, he thinks they "can only excite a smile." He several times falls foul of this celebrated naturalist and bee-keeper, lashing him, as he himself says, with ridicule; but time has proved Huber right and Huish wrong. I have already alluded to his observations regarding the fertilising of queens. He further denies that an egg or maggot, whose original destiny was a common bee, can be metamorphosed into a queen. He turns the hands of time backward when he says, regarding the life of the bee:—"I am inclined to believe that, barring accidents which frequently happen to bees, and which occasion a violent death, they may live three, four, or even more years." His reasoning seems to be as follows:—"I know queens do; if so, why should not workers live as long?"

Then, as now, honey and wax were largely imported, about £50,000 value being taken from Germany alone; because "the culture of the bee here is more an object of amusement than profit." Could not this be written of 1905 as well as of 1805? Swarms then cost much what they do now, from 20s. down to 10s., or even less. Honey

sold at 1s. 6d. per lb. Government then, as now, entirely neglected this important branch of commerce, and any advancement was left to private enterprise. No bee-keepers' association was in existence then, although an earnest effort was made to establish an apiarian society. The foundation stone was actually laid, but the superstructure was never completed, owing to the want of support which had been promised from high quarters.

Just a hundred years ago how many articles which we would consider necessaries were entirely wanting! They had no frame-hives, no sections, no extractors, no super or brood foundation, no adequate means of deprivation, little facility for subduing bees, and none of the thousand-and-one comforts and luxuries we have now in all branches of the pursuit. What vast strides we have since made in our knowledge of the bee, viewed anatomically, and yet we are ever learning! Warder said about 200 years ago that after four apprenticeships to this delightful trade, there were some things relating to these industrious little people which he could not thoroughly account for. That was written about 1705. Huish, in 1805, says, writing of wonderful discoveries made during the century which elapsed:—"Notwithstanding the richness of their harvest (speaking of ancient writers), there yet remains much to glean. Since their time, science has been gradually unlocking her stores, and the mists of prejudice have been dispersed by the penetrating rays of philosophy. Yet the treasures of Nature are inexhaustible, and there is certainly no department in her vast domain, in which curiosity and amusement are more intimately blended than in the study of the bee." These words might as truly be written in 1905 after the lapse of another century.—D. M. M., Banff.

CARE OF BROOD COMBS.

[5855.] In reply to the query of your correspondent, F. T. Lane (5845, p. 127), I would say that the nozzle of my syringe is the regular rose supplied by the makers. It contains about 50 holes of No 60 twist drill gauge, and is, I think, about right. It would not do to be finer, as the least particle would clog, nor much coarser, for the same number of holes, as the pressure or speed of the fluid, is a factor in the washing. With this flow, each comb receives six fills of the syringe, three to each face, one-third of each face being swept twice by each discharge, the syringe travelling horizontally. This ensures a thorough application, and no cell is missed, while incidentally the frame, which should previously have been scraped, and the refuse burnt, has its surface thoroughly wetted. The "holder" upon which the frames are slung thoroughly supports the comb from behind, so that there is no danger of the pressure breaking away the comb, if reasonably flat and well attached. Very new combs are, of course, treated tenderly, but they will stand a good deal of washing, though they require it the least, and there should, therefore, be no necessity for damage. Old and tough combs may be handled in this fashion with impunity. If Mr. Lane can try the business for himself, he will soon find his way about, but if my description is not sufficiently clear, I will send a sketch of the general arrangement of holder, etc.

Referring to shallow-combs. If there is any necessity for washing these, the syringe treatment should be quite effective, but I would not use a strong solution of any disinfectant for extracting-combs, pure and simple. The treatment is essentially for brood-combs, and advantage is taken of every opportunity to remove empty combs for treatment. There are usually some of these in spring, and during periods of dearth. The date of disinfection is noted upon the top-bar. This reference may be kept clean by a small zinc clip which advertises itself, or by the metal spacer.

The Izal solution, which I use for syringing brood-combs, is in the proportion of one tablespoonful of Izal to half a gallon of water. This solution (No. 1.) is all right for hive washing, but I prefer, as being more economical and, perhaps, more thorough, to use a stronger solution (No. 2) in the proportion of three tablespoonfuls to the pint of water. The reason for this is that the hives are first given a thorough scrubbing with soft soap and water, and when soused clean and roughly dried, the solution is applied with a sponge. This method ensures the solution reaching the corners thoroughly, and the strength of the solution is somewhat diluted by the already wet hive. The No. 2 solution is used by me for experimental treatment of foul brood cells, the proportion, being one-tenth, is easily arrived at by the use of a ten-ounce medicine bottle. This is, in fact, the tool I use for the purpose of application. The cork of the bottle is cut with two opposite grooves, one the exit for the fluid, the other an air-hole. Through the cork, from groove to groove, is forced a two-inch french wire nail, which acts as the weapon to pierce the cell-capping, etc., and as the guide for the fluid from the bottle to the cell. No. 1 solution would most likely suit the circumstances of your correspondent, but there is, I think, some latitude in this matter, and if the hives

must be re-used while wet, the solution should certainly not be stronger than the No. 1 given above, but I would not subject small stocks to this treatment till the colony covers four or five frames, and the shade temp. is not below 60 deg. There ought to be at least, one spare hive in stock, but, if not, very little ingenuity is required to adapt a box with a hinged lid, to take standard frames. The inside dimensions need not be anything like standard, it being simply necessary that the frames should hang in it on strips, as in the hive, secure from cold and robbers. Little Bobby Bee must have at least a place of safety in bed, while his trousers are on the line! Of course, there must be the usual entrance to the box, which might be regularly useful to contain the small tools or spare combs. —L. S. CRAWSHAW, Ilkley-in-Wharfedale.

PRICE OF HONEY.

"ANYWAY, ANYHOW."

[5856.] Surely your correspondent "Cambs Bee-keeper" (5848, p. 127) is unjustified in stating that middlemen "become rich anyway, anyhow, by divine right." Middlemen do not coerce struggling producers to sell, nor customers to buy inferior goods at exorbitant prices, as he suggests. As a class they are honourable business men, not philanthropists, and desire some remuneration for their labours, and in return for the risks they must needs take in disposing of goods. The labourer is worthy of his hire, and I consider any fair-minded, two-eyed individual will agree that even a middleman is right in desiring to obtain best value for cash and best market for his goods. "Cambs Bee-keeper" says the middleman becomes rich at the expense of the producer by "divine right." He may as well say, by sound judgment and by making best use of the abilities that God has given him, the middleman amasses heaps of wealth so great that even our friend "Cambs Bee-keeper" is envious.

The middleman is a blessing to the producer and consumer in that he studies the market, and places goods on the market when desired, not as the producer does who desires to sell as soon as honey is taken off his hives. I have not met the middleman enriched by selling produce from bees, nor in any other business, who became rich "anyway, anyhow." Because, if a middleman is not honourable, who will sell or buy from him? "Cambs Bee-keeper" surely has only one eye, which looks only in his sordid mind, and cannot see that all honourable men live by fair dealing in all walks of life, and if some appear to amass wealth, let us not grudge them success, which is generally well and fairly earned, but not by dishonourable "anyway, anyhow," dodges. I send name, etc., and sign—A MIDDLEMAN, Beds.

POLLEN-CLOGGED COMBS.

HOW TO CLEAN THEM.

[5857.] I enclose directions for cleaning pollen-clogged combs: Articles necessary: 1. Suitable board. 2. Syringe with spray nozzle. 3. Water. Take a board, 10 in. or 11 in. broad, and at least 2 ft. long, or sufficient to stretch across any washtub. Nail along the lower front of this a ledge 2 in. broad, $1\frac{1}{4}$ in. thick, or thereabouts.

This board may be placed across a fixed washtub, or on an easel, an outside window sill, or the top of a pail set close to a wall, always having the bottom, AB, about 4 in. from the perpendicular, so as to give a slight backward slope to the direction, AC. Make a few nicks at the back of the ledge before nailing it on. Now place the comb to be cleaned on this ledge, with the frame inverted, the metal ends resting on the ledge. The cells will now be slightly sloping downwards. Fill the vessel below the frame with cold water, or very slightly tepid. Now take the syringe (any size will do, but a large one is preferable), and pour a steady stream or jet into the cells, at the same time moving the syringe across the comb from side to side. This causes the water to strike down the sides of the cells and drives out the pollen quicker. When the cells seem filled with water, lift the frame in both hands, and turn the opposite side to you, top-bar down, raise it and then give a slight downward and outward jerk, and a sudden stop. Put on the board again, and syringe each side alternately. The pollen soon loosens, and may be seen coming out in grains and pellets at every application of the syringe. Usually a few odd cells are more difficult to start, but all cells may be cleaned on one comb, and sometimes two in half an hour. Old combs stand any pressure, but virgin comb must always be cleaned with cold water, and gentle pressure of the syringe; add a teaspoonful of phenyle to the water, give a few good jerks at the finish, or give a few turns in the extractor. Combs readily dry in a warm place, or in a draught of dry air.

The above is the plan I devised and used for some time, and it has answered the purpose fairly well. I will send a further contribution for your next issue, giving an improved method which is both easy and clean.—D. A. V., Dunaskin, N.B.

THE FOUL BROOD BILL.

RESULTS OF VOTING.

[5858.] Now that the annual meeting is over, at which the results of the voting papers returned to me and Mr. Woodley were stated, I think it will be of great interest to all who have taken part in the controversy if you can find space in your columns to print the enclosed tabulated statement of our joint results. The counties are arranged according to the grouping adopted in the Royal Show schedule of last year.

As you will see, the majority of votes are for the Bill, but the weight of the voting is against it.

Will you kindly allow me to thank all who have helped in gathering these figures; also those who wrote detailing their experiences with foul brood, which led them to vote either for or against our proposals, but whom I had not time to answer, as the correspondence became too heavy? I also wish to thank Mr. Woodley for his kindness in placing at my disposal the information he has gathered from many sources supporting his views. I have already done this privately, but having in mind letters which have appeared in your columns on the subject, I am glad of the opportunity to do so publicly.—THOS. I. WESTON, Hook, Winchfield.

	For the Bill.			Against the Bill.		
	Voters.	Stocks.	Stocks not Stated	Voters.	Stocks.	Stocks not Stated.
Cornwall	5	41	1	2	—	2
Devon	48	303	1	4	110	—
Somerset	8	84	—	1	20	—
Dorset	3	14	—	1	—	1
Wiltshire	16	256	—	12	547	—
Berks	11	138	—	18	755	8
Hampshire	13	95	—	17	361	2
Isle of Wight	4	34	—	—	—	—
Surrey	25	221	—	12	110	1
Sussex	9	120	—	7	203	—
Kent	23	202	—	7	106	—
Buckinghamshire	4	22	—	9	194	2
Oxfordshire	2	53	—	27	853	6
Hertfordshire	6	92	—	3	195	1
Middlesex	7	86	—	2	4	1
Essex	19	278	1	9	153	2
Suffolk	1	25	—	—	—	—
Norfolk	3	47	—	3	52	1
Cambridgeshire	4	150	—	14	652	—
Huntingdon	1	2	—	17	925	2
Bedfordshire	4	73	—	9	216	—
Northamptonshire	1	8	—	10	178	2
Leicestershire	5	51	—	8	83	1
Gloucester	13	166	1	10	200	—
Worcester	12	146	—	6	69	2
Warwick	5	56	—	6	63	2
Hereford	1	7	—	—	—	—
Shropshire	4	34	—	—	—	—
Cheshire	19	165	—	9	101	1
Staffordshire	10	99	—	7	77	—
Derbyshire	11	81	—	—	—	—
Nottingham	4	40	—	7	53	1
Rutland	—	—	—	1	20	—
Lincoln	21	201	—	4	78	—
Northumberland	2	24	—	7	270	2
Durham	7	37	—	—	—	—
Yorkshire	18	163	—	16	217	5
Cumberland	5	29	—	5	19	—
Westmoreland	2	23	—	1	30	—
Lancashire	29	376	—	13	120	1
Isle of Man	—	—	—	3	49	—
Wales	10	112	—	8	201	—
Scotland	21	165	—	3	54	—
Ireland	5	158	—	1	14	—
	421	4,477	4	299	7,352	46

BEE-PEST LEGISLATION.

[5859.] Referring to the letter on "Bee-pest Legislation" last week (5852, page 136), I have been long troubled on the point of giving support to or against foul-brood legislation. Some weeks ago it was said in B.B.J. by someone that all persons having any opinion worth recording would by now have given their vote either for or against legislation. I, for one, have not—and no doubt there are many others—for the following reason:—It is well known that in the majority of cases foul brood flourishes most in the small apiaries; hundreds of owners of which have perhaps never heard of the B.B.K.A., B.B.J., or the BEE JOURNAL, nor foul brood. These are the persons to whom legislation would be a boon, but to the owner of a large number of stocks, the advent of an inspector, with legislation to back him up, commanding an inspection at some inconvenient time would be indeed serious, while the small bee-man need think only of getting help in keeping diseased bees away from his district, and would thus favour the scheme which would help him.

That such a Bill is needed I quite agree; but it is the small owners who will benefit, and I think for this reason there should be, if possible, some loophole for the intelligent, up-to-date bee-keeper, who looks to his bees for help. My scheme—one already advocated in your pages—is to give exemption to all persons holding experts' certificates, and on the production of reasonable evidence of healthy apiary.

Some may say, "you would put too much power into their hands." Yet it is the expert you must trust if the Bill comes into force, and it stands to reason that the person who has become a certificated expert must possess some aptitude, and may be quite as capable as the inspector appointed by the Act, as both must needs have passed the same test.

If some such clause could be inserted it would be for the advancement of bee-keeping.—J. N., Langwathby.

BEE-NOTES FROM CUMBERLAND.

[5860.] It might be of interest to South-country readers to know that the hazel catkins are just in bloom here now; as it is more than a month since I first saw them mentioned in the South.

On the night of April 6 we had a heavy fall of snow, from four inches to six inches deep, which still lies white on the Pennines and Cumbrian group. There has also followed some nights of severe frost; on those of the 7th, 8th, and 9th, from 15 deg. to 17 deg. of frost being registered in the Eden valley. How is this for brood-spreading and stimulating? Many gardens have had the gooseberry bloom frozen black, and it is doubtful whether some of the early plum blossom, which is just breaking, and not also have suffered.—I send name, and sign—"BEE-KAY."

Queries and Replies.

[3711.] *Stimulating in Spring—Removing Surplus Stores.*—I have just transferred my bees into clean hives, and in doing this found they have plenty of stores left over from the winter. I also noticed that every stock had several patches of brood in the combs, but they seemed to have too much sealed stores on hand. I therefore ask:—1. Would it not be better to take some of this away and give them frames of drawn-out combs, which I have on hand, so that the queen may have plenty of breeding space? If so, please give me an idea how much sealed stores I should leave them. 2. As I have no ventilators in floor-board and must raise the hive in order to give air ventilation in warm weather, would a quarter-inch raiser be enough to put under hive and cover? I am now stimulating the bees each evening to two holes. A reply in next B.B.J. will oblige.—F. J., Mountmellick, Queen's Co., April 7.

REPLY.—1. We do not advise removal of frames containing sealed stores so early in season as this. It will be far better to stop feeding at once and stimulate breeding by bruising the cappings of sealed stores in centre combs. This will not only save trouble, but serve the double purpose of stimulating and providing the queen with empty cells for egg-laying just where wanted. It will be time enough for inserting frames of empty comb when weather is sufficiently warm to spread the brood-nest without risk of chilling brood. 2. When weather is very hot and hive overcrowded with bees, raise the outer-case an inch or so by a bit of wood laid across each corner of floor-board; then wedge up the hive a quarter of an inch from floor-board, so that bees can pass out on all sides.

[3712.] *Bees Building Comb in Candy-box.*—On opening one of my hives last week to remove empty candy-box, I found the vacuum filled with comb (which I believe is drone-comb) and unsealed brood in nearly every cell. I removed the box and contents. Having read in B.B.J. of a good queen becoming a drone-breeder, I am wondering whether mine is such, as it seems too early in the season for her to lay drone eggs. I bought her with a swarm last May from a well-known dealer, so I cannot think she can be too old. I had intended working this hive during the

coming season for sections only, as the bees (hybrids) are excellent comb-builders and without using a queen-excluder. I am now afraid the queen having once ascended above brood-nest and deposited eggs, she will continue to do so, and spoil my sections. I should be greatly obliged if you would advise me in B.B.J. I send name and sign — SECOND SEASON, Ellesmere, April 3.

REPLY.—If the comb built in candy-box contains drone-cells it does not follow that the queen is a drone-breeder because of drone-brood being seen in the cells. Nor do we think you need have any more fear of sections being spoilt by brood than before.

Echoes from the Hives.

Brook Hall, Londonderry, April 2.—Out of my eleven stocks, ten have come safely through the winter, and are now busily engaged in gathering pollen. We have no willows, so dearly beloved by English bee-keepers, here; and have to depend on buttercups, gorse, and wood anemones for pollen. With reference to the discussion about celluloid for hives, could not all danger of fire be removed by using the carbolic "flag" to subdue bees instead of a "smoker"? We Irish bee-keepers always use this flag in preference to a smoker.—G. F. GILLILAND.

Notices to Correspondents & Inquirers.

PERPLEXED (Herts).—Disinfecting Combs.—1. Combs of last year need no disinfecting if from healthy stocks. 2. The bees certainly have not "eaten the wax" along with the honey in combs referred to, and must, therefore, have carried it out of the hive, if, as you say, it has all gone but the midrib.

A "B.B.J." READER (Congleton).—Drone-brood in Worker Cells.—If no queen could be found, it seems clear that there is a fertile worker in the hive. Should the bees raise a queen from "brood and eggs given from the other hive," as stated, she may have a fair chance of being mated under the circumstances named.

ALBANIAN (St. Albans).—Dampness at Hive-entrances.—1. The dampness seen at hive-doorways at this season usually indicates a prospering colony, and is merely the condensation of moisture from a warm brood-nest. 2. The cocoon sent is that of the wax-moth.

A NEW READER (Anglesey).—Bees Found Dead in March.—1. It is not uncommon to find bees dead in early spring with plenty of stores in the hive. The frames of food may be too far away from the cluster for the bees to reach it in very cold weather, and they perish in consequence. 2. We cannot judge of the "sort of dust" with which you say the bees are covered unless a sample is sent. 3. The combs of food may be given to other stocks so long as there are no signs of disease in hive they come from.

G. W. M. (Alton, Hants).—Bees Found Dead in March.—The comb sent clearly points to death from starvation within the last few weeks. This is shown by the young bees in sealed cells ready for hatching out. We see no signs of disease in sample sent, so the food may be given to other stocks.

Suspected Combs.

A. W. (Cravan).—Sample of nearly new comb sent contains a fine, healthy patch of sealed brood, which has been chilled to death through cold.

A KENT BEE-KEEPER (Sittingbourne).—Sample sent shows that foul brood is developing; not rapidly, but clearly proving that the disease is present in the incipient stage. You did quite right in removing the comb in question, and if the stock is strong in bees the trouble may be got over by careful watching, and cutting out any further cells bearing the same signs. You will soon see now if the disease is making headway, and shape your action accordingly.

WILLIAM (Burwash).—Combs are badly built and old, but there is no disease about them.

H. A. SHORE (Somerset).—All signs of brood have entirely dried up and disappeared. We cannot, therefore, say whether the brood they once contained was "chilled" only or diseased; but the indications distinctly point to foul brood.

Honey Sample.

BLENDER (Wolverhampton).—Sample is only fair in quality; but whether "gathered in Essex," as stated, no one can tell but the producer.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

ORDERS RECEIVED for MAY SWARMS, also for HONEY.—The Presbytery, Marnhull, Dorset. G 67

QUEEN REARING.—Nucleus Hives, three-frame standard size, well made, 1s. 3d. each; 6s. half doz.—GEARY, Barwell, Hinckley.

SELL or EXCHANGE second-hand HIVES and Taylor's Geared Extractor.—HERROD, Apiary, Luton.

BEE, FRUIT, and POULTRY FARM. Five acres freehold, as going concern; stocks (30), appliances, fowls, dwelling, large greenhouse, sheds.—Apply HOBBS, Four Marks, Alresford, Hants. G 77

THREE EARLY SWARMS, from healthy hives. Order now; 12s. 6d. each, package free.—CHADWICK, Expert, 52, Old Park Lane, High Park, Southport. G 77

Editorial, Notices, &c.

THE "ROYAL" SHOW IN JUNE.

PRIZE LIST FOR HIVES, HONEY, ETC.

We invite attention to the announcement regarding the above on page iii. of this issue, and to the fact that the show is to be held a week later than usual, while the date for closing entries is extended for about a fortnight—i.e., to May 15, or at extra fees till May 29. This extension of time will, we trust, enable bee-keepers to make an entry with more chance of their intended exhibits being actually staged, and, in some degree at least, lessen the just complaint against the too early date on which the premier show of the year has been held for several years past. Without having—as yet—had official notification of the fact, we may also assume that the usual concession of return of entry fees will be granted to exhibitors in case of adverse weather preventing the completion of their exhibits in time for opening day. So that, given an ordinarily favourable honey-season, along with the fact that honey of any year is eligible for all classes, we hope to see a greatly increased display on the show-bench this year.

Intending exhibitors should also note the change in the "grouping of counties," as differing considerably from the arrangement of last year in this respect.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of March, 1905, was £4,124.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(*Continued from page* 143)

Mr. Crawshaw said that most of his work had been upon the Doolittle method, but that the Pratt cell, as produced by the Grace machine, had an advantage over the new cell, shown by Mr. Sladen, in the excess of wax provided for the building of the cell, which was, therefore, likely to be larger and stronger. His experience was that cells well begun were the best completed. He did not think that the Claustral attachment would be of any use for the formation of nuclei, by confinement, as suggested, because one essential factor in this method was the realisation by the bees of their confinement, to ensure their marking their new location, whilst the promoters of the Claustral appeared to claim that with this device the bees were unconscious of detention. He suggested that Mr. Sladen had taken "Swarthmore" too seriously, in the matter of the "ten bees," and, speaking from memory, believed that Mr. Pratt stated "that 50 bees would mate a queen, that 100 bees would do it better, but that more than a teacupful was a disadvantage." He would ask Mr. Sladen whether he had actually had any cells completed with the smaller waxed wood cell shown, and, apropos of the reduced labour claimed for the Doolittle manipulations, he asked when in Mr. Sladen's practice the woven wire dummy was usually removed. He afterwards showed the two-piece cell which he had designed, by means of which eggs could be selected for queen-rearing if desired.

Mr. Sladen exhibited a Pratt's cage for queen-rearing, also the two kinds of wooden cell-cups mentioned, and, in reply to Mr. Crawshaw, said he generally confined the bees about 11 a.m., gave the larvæ in their cell-cups about 4 p.m., and liberated the bees at about 8 o'clock next morning. He had sometimes accomplished the whole process in one day, confining the bees at 8 a.m., giving the larvæ at 12.30, and letting the bees out at 6 p.m.; but he preferred the longer period, as by it the larvæ were supplied with more jelly, and the cells better started. In reply to Mr. Crawshaw's query as to whether he (the speaker) had misread Pratt's statement about the fertilisation of a queen with only ten workers, Mr. Sladen said that he had simply quoted Pratt's words. Pratt added:—"How to properly harness the small lot is the point." Answering Mr. Crawshaw's question as to whether he had used the particular form of wooden cell-cup that he (Mr. Crawshaw) preferred, Mr. Sladen stated that he had not done so yet, but Phillips had found by experiment that wooden cups coated on the inside with beeswax were accepted as well by the bees as the ordinary all-wax cups, and he (Mr. Sladen) had not the least doubt that they would be accepted as well by the confined bees. In this respect there was practically no difference between this cup and Pratt's regular cup. He thought he would prefer this cup, partly because, the inside diameter before filling with wax being less, the outside diameter could be made less, and partly because he thought the method of waxing the cup easier and more satisfactory. The *outside* diameter of Pratt's cup at present was three-quarters of an inch, that of the narrow cup half an inch. No doubt a wooden cup containing a compressed wax cup could be made narrower than three-quarters of an inch, but not, he

thought, quite so narrow as a cup that was simply coated with wax. The difference between the different kinds of cups was small, and it was largely a matter of taste.

Mr. Reid suggested that Pratt's cage and cup should be made of celluloid, so that one could see the cells being built. Such material was much lighter, and not so clumsy. It was also a bad conductor of heat, and further, the bees did not object to it. Bees did not like zinc. In answer to Colonel Walker, he (Mr. Reid) stated that he had used nothing else but celluloid for excluders. They continued sound and could be depended on.

Mr. Crawshaw said that it would not be easy to trace the action of cell-building through celluloid. He then made an observation referring to the advantage of large cups for queen-cells, to which Mr. Sladen replied that the inside diameter of both kinds of cups after waxing should be exactly the same. He (Mr. Crawshaw) afterwards referred to the likelihood of producing larger and stronger cells by having a rim of wax projecting around the inside edge of the wooden cup.

Mr. Sladen mentioned a method of Phillips's in which he fixed a delicate cup obtained by Doolittle's dipping process inside the wooden cup, so that the mouth of the wax cup projected a good deal beyond the mouth of the outer wooden cup. As regarded the method of fixing the cups in the hive, he did that on the under-edge of a board shaped like a division board, but which only extended two-thirds from the top. The board was more convenient than a frame. He fixed the cups to the board by pressing them against nail points which projected a quarter of an inch from the edge of the board. He believed that the idea of nail points originated with Phillips, who had them projecting from the base of the cups. He (Mr. Sladen) found it easier to have them in the board.

Mr. Crawshaw suggested that by narrowing the base of the cups they could be made to fit into holes bored in the edge of the board. He exhibited some wooden cups coated with wax, with narrow bases.

The Chairman thanked Mr. Sladen for the interesting paper he had read, and also Mr. Crawshaw and others who had contributed to the discussion. He quite agreed with Mr. Reid that the bees would accept any material coated with wax, as had been proved in various experiments with foundation with sheets of foreign substances embedded in it.

Mr. R. Brown exhibited a bunch of blooms of the common osier, which was abundant in the fen district. It would easily grow in any kind of soil, and he recommended its plantation by bee-keepers. Previous to his journey up to town that day, he noticed his bees working on it in large numbers. A rather remarkable thing was that there was very little foul brood in the Fens, where it grew in every hedgerow, and when we remember that salicylic acid is obtained from the willow, it is possible that this may prove to be a sort of preventive against the disease. He had seen it in bloom on February 13 or 14, and it was very useful as well as pretty. The specimen blooms were handed round and created a good deal of interest.

The Chairman stated that he was likely in a short time to see one of the oldest friends of the association, namely, Mr. J. M. Hooker, who was, indeed, one of the founders of the B.B.K.A. On May 16, 1874, the initial meeting of the association was held, when Mr. Bligh (whom they had recently lost) presided, and was supported by Mr. Hooker (the only survivor), Mr. F. R. Cheshire, Mr. Hunter, and Mr. C. N. Abbott. He (the Chairman) hoped to visit Mr. Hooker in Philadelphia this summer.

Upon the suggestion of Mr. Carr, Mr. Reid moved that Mr. Cowan be asked to convey a kind message of greeting and good wishes from that meeting to Mr. Hooker, who had done so much for bee-keeping in the past. He (Mr. Reid) also proposed a hearty vote of thanks to the Chairman. He was sorry to hear that they would miss him again from their gatherings, but he hoped it would be for only a short time.

Colonel Walker seconded the motion, which was carried amid cheers.

The Chairman replied that he was very much obliged by the reception accorded to the vote. It was always a pleasure for him to attend this meeting, especially as members were ever ready to forgive any shortcomings. Although he was going a long journey, and would travel many thousands of miles, he hoped to come back very soon, the proof of which was that he had taken a "return ticket," available for one year. (Loud cheers.)

The proceedings then closed.

CAMBS AND ISLE OF ELY B.K.A.

ANNUAL MEETING.

The annual meeting of the above association was held at the C.E.Y.M.S. Rooms, Cambridge, on Saturday afternoon, April 1. Among those who attended were Mr. C. J. Mapey (chairman), Dr. Sidney Wood, Mrs. Clark, Messrs. R. Brown, F. R. Ford, G. Dunn-Gardner, A. Matthew, G. Hills, W. Moore, J. Short, Billing, Seamark, A. S. Shrubbs, Bocock, Jackson, Peacock, Frohock, Franklin, T. Barnes, Jones, Casbolt, Rowell, Barber, Bailey, S. Catling, G. E. Rogers (hon. secretary), and others; the total attendance exceeding forty.

The executive committee, in their report,

stated that the hon. secretary during a series of visits to bee-keepers in the county of Cambridge had discovered foul brood in twenty-five apiaries. Several exhibits of honey had been made at shows, at one of which the quantity of honey displayed in the association's exhibit amounted to nearly two tons. During the year the insurance scheme was taken advantage of by fifteen members, who insured 523 hives.

The report was adopted with an addition in which the hearty thanks of members were given to the hon. secretary for the untiring, energetic, and kindly way in which he had performed his duties.

The balance sheet, which was adopted, showed that there was a deficit of £1 3s. 1d., the receipts having amounted to £37 12s. 2d., and the expenditure to £38 15s. 3d. As the liabilities at the end of 1903 amounted to £2 12s. 11d., the deficit of £1 3s. 1d. this year shows, therefore, an improvement in the association's finances.

The following are the officers for the year: — President, Mr. Alex. Peckover; chairman, Mr. C. J. Mapey; hon. treasurer, Mr. L. Tebbutt; auditors, Messrs. A. S. Shrubbs and J. Short; hon. secretary, Mr. G. Rogers; executive committee, Dr. S. Wood, Messrs. R. Brown, F. R. Ford, W. Moore, J. Short, Billing, and Frohock.

Messrs. Allen Sharp, Brampton, and G. Hills, Comberton, were appointed experts to visit and give advice to members.

The meeting then proceeded to consider the question of foul-brood legislation, and eventually Mr. C. H. Bocock moved the following resolution:—"That this association notices with regret that although the returns made to the British Bee-keepers' Association show that those who object to the Foul Brood Bill own a larger number of stocks than the supporters of that measure, and, consequently, have larger interests at stake, the association still persists in its endeavours to pass the measure into law."

The resolution was seconded, but after some discussion it was withdrawn.

The meeting concluded with a vote of thanks to the chairman.—G. E. Rogers, Hon. Secretary.

GLAMORGAN B.K.A.

ANNUAL MEETING.

The annual general meeting of the above association was held on Saturday, April 15, at the Assembly Rooms, Town Hall, Cardiff. There was a very large and representative attendance. The Mayor of Cardiff (Alderman R. Hughes, J.P.) being detained at an important committee meeting, Major-General Lee, R.E., J.P., kindly took the chair at five o'clock.

The secretary read the minutes of the last annual meeting, and they were passed and signed.

Colonel Oakden-Fisher, J.P. and Alderman T. J. Hughes wrote regretting their inability to be present.

The chairman moved the adoption of the report and balance sheet. More than fifty new members were enrolled during the year. The Glamorgan County Council increased their grant to £75, and the Bath and West A.S. made the association a grant of £10 towards defraying the expenses of Mr. W. Herrod, who daily gave lectures in his bee-tent at the Swansea Show. The total revenue for the year amounted to £150 6s. 1d., and the balance in hand is £36 10s.

Two qualified experts toured the county during the spring and summer. Happily foul brood is being reduced; bee-men are being put on the look-out for its first appearance, and advised to adopt immediate and vigorous measures.

Lord Windsor remains president. The treasurer elected is Mr. Watkin Lewis, J.P.; auditor, Mr. J. Jenkins, A.C.A.; representatives at meetings of B.B.K.A., Messrs. R. T. Duncan and Watkin Lewis. The hon. secretary wished very sincerely to be relieved of his work, but in response to the unanimous wish of the meeting, agreed again to continue in office. The executive committee, with four additions, were elected. Votes of thanks to the County Council, and the Cardiff and County Horticultural Society were unanimously adopted.

The Mayor of Cardiff afterwards entertained the members and their friends to light refreshments. In the evening a lantern lecture on "The Pleasures and Profits of Bee-keeping" was given by Mr. W. G. Preece.—Wm. Richards, Hon. Secretary, Cardiff, April 17.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[5861.] The weather continues very unsettled; wet and dull, with only a few hours' sunshine. These periods are used by our bees, as they only know how, for work; but short intervals are not sufficient for the daily needs of a rapidly-growing family in a progressive, flourishing condition. They must, therefore, have either

stores of food in reserve within the hive, or extraneous help from the feeder must be given continuously until we get settled weather, and honey is obtainable outside. Remember we, in the Southern Counties, are within two months of the beginning of our honey harvest, and our best endeavours should be given in assisting the bees to proceed vigorously with the production of brood, in order that we may have hives overflowing with bees in the pink of condition for garnering the earliest general honey-flow. In fruit-growing districts the bees will, of course, be able to gather sufficient honey, if the weather is propitious. I do not remember having seen a finer display of fruit bloom than we now have everywhere around us this season. I trust it will prove a good year for the farmers' crops, for then we bee-keepers will benefit by their good fortune and be happy men.

Do not neglect to order your required bee-goods in good time. This will ensure having things when required; besides, bee-goods of all kinds are not perishable, but will keep till wanted. I would advise those who have not yet overhauled their hives to do so without delay, or they may find some stocks practically at a standstill for want of food. Remember that the little incoming food is barely enough to keep the colony alive.

The "Swarthmore" System. — This system of queen-rearing may be successful at "Swarthmore," under the practical hand of Mr. Pratt, and where more settled weather conditions prevail than we get in England. Americans say that the weather in England consists of "samples" only, and we as Britishers know that this saying comes very near the truth; and this fact shows, I think, the unsuitability of the system to this country. Besides, under the present system of small apiaries, it would appear there is only a limited demand for queens. I have it on the authority of one of our most practical queen-rearers that in more than one season a considerable number of queens reared for sale have had to be destroyed because there was no demand for them. So that, in my opinion, these "Swarthmore" queens, which one would expect to be reared very easily, would also be sold at a low price, and, unless we get an even summer temperature from start to finish of the rearing time, we must expect to have inferior queens. All my queens are bred under the swarming impulse, and hatched in three-frame nuclei and in six-frame hives, with thin dummy between the two nucleus colonies. Personally, I would far rather re-queen my stocks for winter with queens from driven lots of bees, if I knew they came from healthy colonies, than I would with queens bred in this country on the "Swarthmore" system. In saying this I in no wise condemn the system when worked under suitable climatic conditions.

I thank Mr. Weston for kindly tabulating the replies for and against foulbrood legislation. I have recently received several more names "against," so that our number of owners approaches the number Mr. Weston received "for," and if hives had voices the "ayes" would have a thumping majority.—W. Woodley, Beedon, Newbury.

BEE-NOTES FROM THE NORTH.

[5862.] I saw young Golden Italians flying from my hives on February 25; the queen was only introduced in October last. I may say the Italian bees of this stock scarcely left their hive at all during March; in fact, it was only on the last day of the month I saw them out again; nor did I see one Italian bringing in pollen, as the black bees of the same hive were doing freely. When would these bees have hatched out to be flying so early in the year? I notice my Carniolans have a habit of alighting all over the front of the hive and basking in the sun, in a way I see no others do. They seem to enjoy sporting in front of the hive, and many of them are evidently young bees, so there must have been early breeding in this hive. March has been a bad month with me, so far as bees getting to work outside; only on one or two days have they been busy on willow-catkins and crocuses. Stocks located on lower ground than mine may possibly have done better.

I notice that although there is an abundance of fig-wort in my grounds the "honey-wasp" is never seen on it in this locality; though I see this variety of wasp in the garden frequently as well as other varieties of the larger wasp family.

Speaking of wasps, I often wonder so little is said as to their comb-building. One variety construct their combs with decayed wood; while another uses the fibre of sound wood. Yet, with these brittle, and, one would think, unworkable, materials, they form beautifully perfect combs. This seems to me more wonderful than the honey-comb of our hive-bees which is made of plastic wax.

In one of last year's British Bee Journals I asked if any bee-keepers had noticed the habit that bees have on first coming into the light at the entrance of their hives of passing their two forelegs over their antennæ, that is, if they are intending to take flight. Can any reason be given for this habit, to which, as far as I

(*Continued on page* 156.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Waller, whose apiary appears below, sends the following useful notes detailing his methods of working, which need no addition from us :—

"At your request I have much pleasure in sending a few notes of my bee-keeping experience. Some eight years ago my brother-in-law went abroad, leaving his apiary behind intact. Having assisted him with his bee-work on several occasions I removed the hives to my own garden, determined to manage them myself, as I considered it would be a nice break in my occupation (that of a tailor and outfitter). Thus my business made me a dresser of men; but well do I remember the many severe 'dressings' the bees administered unto me at first owing to my clumsy manipulation and rough handling. However, a little experience revealed to me my faults in this line, and I soon found resolute quietness a necessary essential. At that time I had only two stocks in frame-hives made by a local man; but I then began to take the B.B.J. and *Record*, joined the Lincs B.K.A., and in due course was visited by an 'expert,' who recommended me to read the 'Guide Book,' and on reading the latter it did not take me long to find that my hives were not up-to-date, and did not take the standard frame.

"I set to work, therefore, and built two hives on the 'W.B.C.' principle, but with the 'Cowan' type of roof, and was determined to have everything interchangeable. Success resulted, and my hives are all of the same stamp. I make all my own hives, and also the small hives for holding nuclei as seen in front of the full-sized ones, for in the slack season I am also careful to thoroughly clean and paint my hives early in March, and about the middle of the same month I begin stimulating my stocks in order to build them up ready for the honey-flow and forming nuclei. I also then select my two best stocks for rearing queens and drones respectively.

"About May or June, according to the weather, I start my nuclei, placing one in front of each hive, and paint each of different colours. At the beginning of August I remove the old queens from all stocks, and unite the young queen and bees in nucleus to the adjacent hive, well knowing that the queen has mated early (which is an important point), and has quite a little colony of her own progeny with her at joining-up time.

"If I want to increase stocks I leave the bees in the nucleus hives, drawing them together gradually, and unite after removing one of the young queens. I then begin to feed up all stocks for winter, having each hive well cleaned and packed down with an average of thirty pounds of food by the first week in September. I medicate all syrups for feeding, and always use naphthaline balls in brood-chamber.

MR. JNO. WALLER'S APIARY, HOLBEACH, LINCOLNSHIRE.

"My largest take from one hive was 140 lb. of surplus honey in shallow-frames. Our chief source of nectar here is fruit-blossom, white clover, mustard, and lime-trees. Some seasons we have hundreds of acres of mustard grown for seed in this vicinity. I gained my 'expert' certificate in 1902, and have done a deal of exhibiting at local shows, generally carrying off some premier honours. I also possess an excellent library containing all the best known books on the subject, but always recommend the 'Guide Book' to my several pupils.

"My honey is sold locally, realising from 8d. to 1s. per lb. 'Up to-date' bee-keeping is a fascinating and very profitable hobby which I can heartily recommend. In conclusion, please accept my thanks for the many valuable and serviceable hints I have received from your estimable paper.

"Wishing all brother bee-keepers a successful season in 1905, for which I am myself also hoping."

("*Bee Notes from the North*" *continued from page* 154.)

have noticed, there is no exception? I have never seen any reply to this question in your pages. I had hoped to have seen the Editors' thoughts on the matter.

On reading Mr. Cowan's most interesting book, "The Honey-Bee: Its Natural History" lately, I see the thought is there again given that the antennæ of insects are connected with a sense we do not possess, and so can form little idea of it. My own idea has been that what we speak of as the atmosphere may be full of electric currents that may be quite discernible to this sense possessed by bees; in fact, as it is well known, there are the ultra colours unseen to the unaided human eye and sounds all around us undetected by the human ear, so there may be paths through the atmosphere which these little insects follow, and that the habit of which I have spoken is a focussing of the antennæ on coming out into the outer light. The length of a bee's flight (set by some at four miles from the hive) is a marvellous distance for so small an insect to travel. I remember in my young days hearing that butterflies come across the British Channel to us from France, but then they are blown down by high winds and do not return. I have seen myself a butterfly a long way out to sea drifting before the wind, but I do not know any insect that returns to the same spot, travelling from its home the distance that a bee does. As far as my own observation goes, wasps do not travel the same distance, although queen-wasps may be drifted a long way by high winds in spring and autumn. I do not know how far notes on any other insect are admissible in BEE JOURNAL, but when speaking of these insects, I have noticed that a great number of queens in the spring is not a proof that they will be abundant that summer. The reason of this appears to me to be that many queen-wasps would get mated in the autumn; these may survive the winter, but can no more produce a colony than can a queen-bee under similar conditions; nor even do they produce males, I expect, as bees are said to do, and I almost begin to believe they must, since reading Mr. Cowan's book above referred to. These barren queens may be known by the dark colour of their bodies, and the abdominal section will be found empty upon examination.

I wonder if male wasps are produced without the eggs being fertilised, or if this is the case with any of the family of humble-bees? One other point with regard to bees' flight which makes me think that there is something which guides them unknown to us higher creatures of creation. If a hive is moved a very short distance, the returning bees will go to the place where it stood, hovering in the air for a few moments before going to the hive, and this although there is no near object for them to have marked, so far as I have noticed. If the hive is moved to right or left of its old position, this is more apparent. It seems as though they travelled to a fixed point in the atmosphere expecting to find their hive there, and are puzzled for the moment at its removal.

How will this bitter cold affect the bees? On the 6th inst. we had severe frost, and on the 7th the ground was covered with snow, and, as I write, 13 degrees of frost! Will this cause chilled brood? I send name, etc., and again sign myself—HUMBLE BEE, Bridge of Allan, April 8.

NOTES FROM NEWMARKET.

LOSS OF QUEENS IN SPRING.

[5863.] Since my last "Notes" were penned, a short, but sharp, return of frost and snow has reminded us that ofttimes "Winter lingering, chills the lap of May." The gooseberry crop, save in sheltered gardens, has, I fear, suffered irreparable injury; the fruit trees were not forward enough to be affected by it, so that the frost has indirectly benefited, rather than lessened, the chance of a good crop.

But how have the bees fared? For myself, I find stocks rather below par as regards strength; they also show more chilled brood on the outside frames of brood-nests than one quite cares to see, and where the abnormally fine and mild weather at end of March induced the inexperienced to "spread the brood," it is certain that the

tender larvæ will have perished in batches. Strong stocks, however, in sheltered situations have not suffered at all; but the brood-nests that I have examined stood on the 11th—in point of size—exactly where they did on the 3rd. This means that a whole week's progress has been lost.

Judging from what I learn from bee-keepers in my own district, queenlessness seems to be more than usually prevalent this spring. No doubt a fair proportion of cases are due to old and worn-out queens dying off during the winter; but the majority are probably due to the extensive swarming of last June. There were not only first, second, and third swarms, but in some cases even a fourth, all the latest-hatched virgin queens issuing with the last swarm. Such a swarmed-out stock is, of course, in a hopelessly queenless condition. The maxim that I preach on this point, therefore, is to invariably examine swarmed stocks twenty-one days after the date of their swarming. If neither larvæ nor eggs are found it is safe to assume that the stock is queenless, and should be at once re-queened. Unfortunately, however, practice does not always coincide with precept. Business prevented me from examining all my swarmed stocks, and, in consequence, I lost three colonies through queenlessness.

Again the question arises, why do queens desert their hives in the spring when there are plenty of bees, stores, and the colony seems as prosperous as one could wish? The solution I offer is that the queen comes out for an airing, and on returning enters another hive near by in mistake for her own, when she is at once seized and killed by the workers guarding the entrance. An instance of this occurred in my own apiary recently. A certain stock, when examined in March, showed "all well"; but on the evening of the 3rd I noticed a commotion at the entrance of this hive, while all the others were quiet. I intended examining it on the morrow, but the weather was bad, and it became steadily worse, and no chance occurred till the 11th inst., when I found neither queen, eggs, nor unsealed brood in the combs. I think this shows that my suggested explanation of loss of queens at this season of the year is probably the right one.

I may give a further illustration if confirmation of my view is needed:—A new hive, empty, and with its alighting-board coloured green, was standing with its entrance closed twelve feet immediately in rear of another hive, the latter being occupied, and also having a green alighting-board. One morning I noticed a commotion in front of the empty hive, and on going closer saw a number of bees trying to effect an entrance, the laden thighs of most of them plainly showing that they had been busy pollen gathering, while the others were no doubt returning with nectar or water. Not till then did I notice that the colour of both alighting-boards was the same. For half-an-hour I watched their numbers grow till there was fully half-a-pint of bees trying to get in, when I stopped further waste of time by removing the hive to a distance, whereupon the commotion was soon transferred to their own hive in front, the bees making for the entrance as fast as their legs could carry them.

In place of the empty hive take an occupied one, and for the returning of field-bees take an errant queen, and there is your solution of "another queen gone since yesterday!" — C. H. Bocock, Ashley Apiaries, April 15.

[Mr. Bocock asks us to correct a slip of our printers in his last "Notes" on page 127. It appears that the term "layers" is used in his district for the young growth of white clover, and sainfoin. By reading his "Notes" in the light of this explanation, the matter will be made clear.—Eds.]

OPERATING ROOM.

FOR QUEEN-REARING.

[5864.] A small building or room, convenient of access from the apiary, is a real necessity if queen-rearing is to be carried on to any extent. The building need not be larger than four feet square, nor higher than to clear the head while standing erect. It matters little of what material it is built, if made waterproof and bee-tight; but, of course, the more substantial it is made at first the cheaper it will be in the end.

Quite a satisfactory portable operating room may be constructed in frame-work covered with heavily-painted duck or strong roofing-paper and thin boarding, at a cost so slight as to be hardly worth mentioning.

The room should be well lighted on all four sides and provided with a wide doorway. Have the sash made to swing outward, and cover each window opening with a screen to swing in the same manner, for purposes of quickly getting rid of bees directly an operation is over.

The room should contain a bench of convenient height while standing, with racks beneath for storage of combs, etc. To the right of the bench construct a shelf to hold an oil-stove for heating purposes, and upon the backboard of the bench arrange the tools most often used in queen-rearing. Hang up a thermometer to record the temperature (which should be 90 deg. Fahr. for most work), and use a stool for comfort.

Awnings or vines on the sunny sides of the house will be found both attractive and useful during the warm days of mid-summer.—"Swarthmore," Pa., U.S.A.

POLLEN-CLOGGED COMBS.

[5865.] If you have a dozen or two frames you desire to clean, take eight at a time. Syringe them with water, and set to one side of the wash-tub, leaving all to soak for an hour. When you can spare a few minutes, put one on the board and use the syringe with as much force as you can to each side alternately, then lay aside, always keeping inverted. Do each frame the same way once or twice, and lay aside till the whole eight have got a round. Begin again with the first, and go over again, leaving them, if necessary, till a more convenient time, morning, noon, or night. Always jerk out the water before using the syringe, and leave the comb filled with water when a round is finished.

On Saturday last I cleaned eight combs in two hours, and I find them all dry to-night (Monday) in my bee-house.

I find that by filling the cells at night with water, the pollen is softened in the morning, and removes very readily.

For mouldy pollen, take a darning-needle, and pick the skin off. For difficult cells, stir the pollen with the eye-end of the needle or the half of a curling pin with a nob on the end.

Cleaning Frames.—For those who wish to clean old frames try this plan:—Fill a washing copper (boiler, it is called in Scotland), add one Babbit's washing powder and a handful of washing soda. Put in as many frames one upon the other, as it will hold when the water is boiling. Keep the frames under water for a few minutes. Remove one at a time, giving a scrub with a floor brush, and, after giving a dip again, dry with a cloth, and set aside. This is all that is needed, unless you desire to use a little phenyle in the water—which I always do. — D. V., Dunaskin, N.B., April 17.

Queries and Replies.

[3713.] *Bees Dying in Winter.* — The sample of comb which I send is from a hive the bees of which died during the past winter. The stock in question was strong in bees last autumn. I see there is plenty of food, but only a mere handful of dead bees left. The comb looks rather suspicious, and I will be obliged if you can help me, as I have no means of testing the matter by a microscope powerful enough to study the bacilli. I have kept bees for several years now, but never had this trouble before. I so often read the good advice given to other bee-keepers, so trust I am not imposing on your valuable time in advising me.—I send name for reference.—W. P., Enfield.

REPLY.—The appearance of the partly sealed cells in comb sent indicates that the stock has been "robbed." There are no distinct traces of disease in comb except in a single cell, wherein we find the remains of dead larva plainly shows foul brood in the last stage prior to drying up. With regard to the "handful of dead bees left," it is probable that the bulk have joined forces with the robbers and gone off to the hive of the latter. In any case, it being certain that the stock had suffered from foul brood, we advise you to destroy the combs, and on no account use the honey left in hive as bee-food.

[3714.] *A Beginner's Queries — Feeding and Transferring Bees.*—As a reader of the B.B.J., and a beginner with bees, may I ask advice on the following? I have a stock built up from driven bees last back-end, when they put on four frames of sealed honey and four of foundation. The bees seem strong and have been busy carrying in pollen for some weeks past. I therefore ask:—1. Am I to feed them now? My only other stock is a second swarm of last year now occupying an old wooden hive with very large frames. I should like to get the bees into a new hive with standard frames. 2. Can you tell me how to do this, and the best time to operate? I may say the bees appear to be doing well, and are more numerous now than they were earlier on. I enclose cash for Cowan's "Guide Book."—H. W., Bracebrough, Stamford.

REPLY.—1. Examine the food stores at once, and if found plentiful do not give food, but bruise the cappings a few inches of sealed stores at intervals. 2. Now that you possess a copy of the "Guide Book," we need only refer you to the directions for transferring bees on page 140.

[3715.] *Transferring Bees from Skeps to Frame-hives.* — I will be obliged for an answer to following questions. 1. How can I get the bees from a straw skep into a frame-hive, and when is the proper time to do it? The stock in skep is two years old. 2. How many frames of foundation would the frame-hive require? 3. Would it do to take artificial swarm from them the same year? I send name for reference.—SKEPS, Sussex.

REPLY.—1. Your best course will be to let the bees in skep transfer themselves to frame-hive, according to the full directions given in "Guide Book" (pages 141 and 142). 2. On the plan referred to, all frames in new hive are fitted with full sheets of foundation. 3. It would not be advisable to take an artificial swarm from the transferred stock this year. Better let them

work for surplus, and divide the stock at close of the main harvest of honey is gathered, if increase of stocks is wanted.

[3716.] *Transferring to New Hives.* — Would you kindly advise me in the following?—Last year I purchased a swarm of bees in an old frame-hive, but I now find after so much rain that the hive is very damp inside, besides being cold and draughty. I therefore ask:—1. Do you advise me to transfer the frames and bees to clean hive at once, instead of waiting till May, as directed in "Guide Book"? 2. Would it matter if I painted the new hive a different colour to the old one? I send name and sign—ANXIOUS, Newport, Mon.

REPLY.—1. If the frames in old hive are of "standard" size, there is no need for any delay in transferring; indeed, it will be advantageous to do so on the first fine day, for should any faulty combs be found they may—if broodless—be left out and replaced, when spring has advanced, with frames of foundation. 2. The new hive may be painted any colour.

[3717.] *Queen Bees for South Africa.*—Having recently started bee-culture out here, I am anxious to improve the quality of my stocks. Will you, therefore, kindly say if you think it possible for me to get *queens* from *England*, Italy, or Egypt, and ensure their safe arrival here in Johannesburg? I have only a dozen colonies of bees at present, but, if successful, may have some interesting news for the B.B.J. later on. Your kind reply will oblige. I send name and address for reference. — WANDERER, Johannesburg, February 3.

REPLY.—There will be no great difficulty in getting queens safely to your place if ordered from reliable men who know how to pack them properly. You will find names of queen-breeders in England and in Italy in this number of B.B.J. when it reaches your place.

[3718.] *Difficulties in Transferring Bees.* —I have acquired a hive with an old garden. The hive has been left to itself for a long time. I saw it for a week in December without any roof on it, and covered with only one quilt of canvas. However, I have taken two supers full of honey off the hive, and put another felt quilt on for protection, and given syrup.

I find that the frames run from front to back, and that they are cemented together. Not only so, but the combs seem to be cross-built, or running into each other. But the hive is full of bees, which seem active, and are bringing in pollen fast. There is also some honey in the combs. With some difficulty I removed a queen-excluder from the top of the frames. It was cemented down with bee-glue everywhere. What I want to know is:—1. Should I not transfer the bees to a new clean hive? 2. If so, when, and how? 3. How am I to clean off the thick ridges of bee-cement?—T. D. LAWSON, Galway, April 10.

REPLY.—1. The task of transferring a stock of bees and combs such as are described above is so far beyond the powers of any but a skilled bee-keeper, that we advise you on no account to undertake the job. Even if got through, and done well, the result would only be a set of patched-up, crooked combs such as no good bee-keeper would tolerate in his apiary. 2. As the bees seem to be doing so well in their present home, we should leave them therein, and when a swarm comes off—as it should do early, judging by present conditions—hive the bees in the new hive you have on hand, after preparing it for use by fitting the frames with comb-foundation. 3. Propolis (bee-glue) is usually scraped off.

Echoes from the Hives.

Charing, Kent, April 16.—I have recently had an opportunity of examining an exceptionally good stock of bees. They are the property of Mr. Babington, Industrial School, Ashford, and are the descendants of a swarm about which Mr. Jesse Garratt wrote you some time ago. The said swarm was so large that from it and the parent hive three strong stocks were formed. On April 12 I examined a hive occupied by the same strain of bees and found it quite full of brood, except on extreme outside frames. There were also drones on the wing at that early date. We have had excellent bee-weather in Mid-Kent so far. The plums are now in full bloom, while cherries and pears will soon follow suit.

[The writer of above "Echo"—inadvertently, no doubt—omitted to send name. We hope he will kindly bear the omission in mind, as names should be attached to all communications.—EDS.]

Woobine Apiary, Hathern, near Loughborough, April 17.—Saturday, April 15, was a very nice day here, bees working on the plum and pear trees, gooseberry bushes, etc., all of which are a mass of bloom this year. The bees worked without a break from morn till night. I also saw the first drones of the season on the wing from one of my strongest stocks on that day. Queens are doing well in filling the brood nests, having six frames of brood already. Given favourable weather, I think we shall have early swarms in this district.—S. H. T.

Notices to Correspondents & Inquirers.

*** In reply to inquiries, we may explain that the recent press of matter has caused a temporary suspension of our "Homes of the Honey-Bee" pictures. We have already on hand engraved tone-blocks of over a dozen apiaries, and hope to get them all in print before the busiest season is on.—[EDS.]

ST. HELIER (Jersey).—Doubling and Storifying.—1. By following closely the simple and clear directions on page 58 of "Guide Book," you cannot well go wrong. Had excluder zinc been required between the two hives, it would have been so stated. 2. The hive when placed over that to be "doubled" is filled with frames of brood taken from that deprived of its combs, as plainly stated in the book. 3. The brood-chambers in both stocks being supposed to be of the same size and interchangeable, we are at a loss to know why you ask the question, "Should I use standard (deep) frames in both?" 4. Referring to the question of ventilation, as the hives mentioned do not take the standard frame and are not up-to-date, it is not for us to say whether or not they will answer with regard to affording sufficient ventilation, etc. Our advice is, get rid of them and adopt the more modern hives suitable for use, according to the instructions in "Guide Book." This done, adhere closely to the directions given, and it will not be the fault of the book if failure follows, as every operation described is the outcome of the author's own practical experience and nothing is overstated. The remaining numerous queries put may be answered by reminding you of the adage, "bees do nothing invariably."

A. WILLIAMS (Praze).—Comb Samples.—Your letter must have miscarried in post as we have no trace of it.

BIENEN VATER (Leeds). — Water Troughs for Bees.—The drinking place shown in photo will do very well for the purpose, but for our own use we should have preferred a rough, unplaned board for the water from tap to drip on to, as affording a warmer and more comfortable foothold for the bees while carrying off the water in early spring, than a cold stone. The little photo sent makes so pretty a picture that we are sorry it did not show more than one of your six hives, so as to include it in our "Homes of the Honey-Bee."

SKEPS (Sussex). Transferring from Skeps to Frame-hives. — 1. You had better allow the bees to transfer themselves according to the directions in the "Guide Book." 2. If above plan be followed, the frames in frame-hive are fitted with full sheets of foundation. 3. No need to feed the bees if there is food in skeps when latter are placed above the top-bars of lower hive.

T. FINCH (West Yorks). — Malicious Damage to Bees. — The proper course will be to summon the persons, if known, before the County Court judge for the amount of loss through damage done to bees and hives.

W. GIBB (Brighton).—Disappearance of Driven Bees.—We can only guess that the bees have deserted the skep and joined some colony near at hand, better provided with food and the comfort of a well-stocked frame-hive. To put a driven lot of bees in an empty skep in September was too much for their powers, even if "fed with syrup" at the time as stated. The wonder is how they managed to survive till March this year on the four pieces of comb they were able to build, and we are not surprised at the bees decamping as stated. If you make another attempt at bee-keeping, we strongly advise you to read up the subject beforehand.

J. N. H. (Kidderminster).—Joining B.K. Association.—The hon. secretary of the Worcestershire B.K.A. is Mr. J. P. Phillips, Spetchley, Worcester.

Suspected Combs.

BROOD (Kettering). — There is not a trace of brood in capped cells, all being quite dried up and gone. We have not much doubt that the bees were diseased, but a cell or two with some remains of larvæ might perhaps have been sent, as bees were alive last month, and thus helped us to diagnose the case readily. We advise burning the combs and frames.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

WANTED, English Light Clover HONEY, 28lb. tins and sections.—Samples and price promptly to H. C. GIBSON, Ballygowan, Belfast. G 84

OBSERVATORY HIVE, polished pine, with panel shutters, take three Standard Frames; sale, or exchange bees or clothing.—COLLINGE, Leyland, near Preston. G 82

5 STOCKS BEES, Standard Frames, all good order, each with two body boxes, lifts for crates of sections above, one empty hive, sundry appliances, about one gross Taylor's 14 oz. screw cap jars, 14s. gross, on rail. Offers for stocks. Must sell, owing to removal.—For more particulars apply WEBSTER, Plevna, Gourock, N.B. G 86

3 STOCKS BEES, very strong, in good Frame Hives, "W.B.C." pattern, £1 each. Two Strong Stocks, in "W.B.C." body boxes, 16s. each. Warranted healthy.—THOS. SHIPLEY, Folkington, Polegate, Sussex. G 86

ORDERS FOR EARLY SWARMS. Guaranteed from healthy stocks. First Swarms, 12s. 6d.; seconds, 8s. 6d.—G. WAFFORN, Upper Hollanden Farm, Hildenborough, near Tonbridge, Kent. G 87

HONEY FOR SALE, good colour, 7d. lb.—ASHTON, Leigh Manse, Westbury, Wilts. G 85

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, April 19, Mr. T. I. Weston occupying the chair. There were also present Dr. Elliot, Messrs. W. Broughton Carr, W. F. Reid, W. Sole, E. Walker, and the secretary. Letters explaining inability to attend were read from Miss Gayton, Messrs. R. T. Andrews, T. Bevan, R. Brown, W. H. Harris, R. Godson, J. B. Lamb, and A. G. Pugh.

The minutes of the previous meeting were read and confirmed.

Two new members were elected—viz., Mrs. Maudie Cooke, Long Copse, Ewhurst, Surrey, and the Hon. Frances Wolseley, Farmhouse, Glynde, Sussex.

The Finance Committee's report, presented by the chairman, gave details of receipts and expenditure to date, and, together with a list of payments recommended by the committee, was duly approved.

Arrangements were made for the first-class examination to be held in London on Wednesday, May 17, and for an examination for third-class expert certificates in Cumberland, June 1 to 3.

The schedule of prizes to be offered at the Dairy Show was revised for approval by the B.D.F.A., and nominations made of judges to officiate at the Dairy Show, Grocers' and Confectioners' Exhibitions.

Other business on the agenda had to be adjourned till the next meeting, which will be held on Wednesday, May 17.

OXFORDSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the above Association was held at the residence of Mr. H. M. Turner (hon. secretary and treasurer), on Saturday, April 8. The President (Earl of Effingham) occupied the chair, and among those present were Mr. G. Herbert Morrell, M.P., the Rev. R. Hutchinson, Mr. D. J. Hemming, Mr. A. Humphris, Mr. Aldridge, Mr. J. J. Salmon, Mr. H. M. Turner, and others.

The Hon. Sec. submitted his report and balance-sheet for the year, from the former of which it appeared that during the year the experts of the Association, Messrs. A. Humphris, E. Hancox, and G. Jordan, had examined 1,154 frame-hives and 397 straw skeps, and in most cases stocks were found to be in a satisfactory condition. Regarding foul brood, however, it exists in about a dozen districts of the county, which is a strong argument in favour of the passing of the Bee Pest Bill. Lectures had been given at twelve different centres, seven being in connection with various village horticultural associations, whilst the others were given in schoolrooms or at apiaries in the village. Members' subscriptions, of which some are still due, amounted to £21 8s. 6d., as against £22 15s. 6d., whilst payment to experts amounted to £40, as against £35 11s. in 1903.

According to the balance-sheet, the year began with a balance in hand of £7 12s. 6d. Their receipts amounted to £53 2s., and payments £53 18s., so that up to the time there was a balance due to the bank of 16s. However, they had a quarter's grant (£7 10s.) due from the County Council, so that the balance in hand would be about £6 14s.

Mr. G. H. Morrell, M.P., moved the adoption of the report and balance-sheet, and in doing so he had a few words to say about the work which had been going on in their Association, and more especially in that of the Council of the B.B.K.A., of which latter body he was a member. First, with reference to the Bee Pest Bill, speaking as a member of the Council of the British Bee-keepers' Association, he might say they had been considering the matter for some time, but they had been obliged for the present to withhold action on the ground that there was more opposition than one would have thought. Their own Association most certainly desired to see legislation on the matter, and a large number of other associations and committees were of the same opinion. Numerous meetings of the committee specially appointed to consider the matter were held, and a Bill was drafted and widely circulated. Then they had to ascertain to what extent those proposals would be supported by the county associations. He had himself brought the Bill twice before the County Councils Association, and they asked him to refer it back to the B.B.K.A. in order to obtain their views upon it as a united body. Eventually he had to put before the County Councils Association this statement: "That though the Council of the B.B.K.A. had not yet obtained full returns, and although the Bill was looked upon with considerable favour in some districts, the opposition in other quarters is much more formidable than has hitherto been anticipated." They would thus see why he did not feel it to be his duty, without more specific instructions from their Association, to press it upon the County Council. After some further remarks from Mr. Morrell, the motion was seconded, and the report and balance-sheet were adopted.

Mr. Salmon, in proposing the re-election of Lord Effingham, of Tusmore, Bicester, as their President, said they were much indebted to his lordship for his services

during the past year, and, as their industry to a great extent concerned cottagers and persons of a humble walk in life, he could assure his lordship that these persons appreciated the time given to the work by some of the gentlemen in the county.

This was unanimously carried.

The Earl of Effingham briefly expressed his thanks, and said he would be pleased to accept office again.

The vice-presidents were re-elected.

Mr. H. M. Turner was re-elected hon. secretary and treasurer *nem. con.*

The auditors, Messrs. W. Beeson and J. J. Salmon, were re-elected, as were also the following committee: Messrs. E. Goddard, G. Jordan, A. Humphris, J. J. Salmon, D. J. Hemming, R. Allen, and E. Hancox.

After some further business arrangements were completed, the meeting concluded with votes of thanks to Lord Effingham for presiding, and to Mr. G. H. Morrell, M.P.

WARWICKSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the above association was held at the Grand Hotel, Birmingham. Mr. F. E. Muntz presided, and among those present were Major Deykin, Messrs. A. H. Foster (chairman of committee), J. Burbidge, J. L. Hawkes, T. L. Griffiths, J. R. Young, Geo. Franklin (expert), E. Franklin and others. The annual report showed that the membership was greater than in any previous year. The accounts showed a deficit on the year's working of £25, which was attributed to the expenses connected with the show at Leamington in August. The expert had visited 403 apiaries in the spring, and found bees on the whole in capital condition. Of 1,969 stocks owned by members 58 were affected with "foul brood" in 36 different apiaries. During the autumn tour foul brood was found in nine apiaries, chiefly slight cases. This was largely due to prompt destruction of infected stocks. The Chairman, in moving the adoption of the report, said the association, after an existence of twenty-five years, was now one of the largest associations in England, having a membership of 450. The importation of foreign honey was decreasing, and therefore it might be assumed that there was a greater production of honey by British bees. Mr. T. L. Griffiths seconded the motion, which was carried. The president (Lord Leigh), vice-presidents, the hon. treasurer (Mr. A. H. Foster), the hon. auditor (Mr. J. L. Hawkes), the chairman of committee (Mr. A. H. Foster), and the hon. secretary (Mr. J. N Bower), were re-elected, and thanked for their past services. Mr. George Franklin then delivered a lecture on "Work in the Apiary."—J. N. Bower, Hon. Secretary.

NORTHUMBERLAND AND DURHAM B.K.A.

The eleventh annual meeting of the Northumberland and Durham Bee-keepers' Association was held in the Y.M.C.A., Blackett Street, Newcastle, on Saturday, March 25. Mr. R. Huggup occupied the chair. Among those present were Messrs. J. N. Kidd, C. Thompson, W. Davidson, W. Armstrong, J. B. Peacock, T. Russell, T. Gardener, W. Clark, G. Kirkup, J. Smith, L. Richardson, T. Lee, H. Harmer, Jas. Waddell (secretary), and others. The secretary, in his annual report, stated that last year had been a poor one, honey having been scarce. It had sold well, clover honey fetching 1s. and heather up to 2s. per lb. The expert's tour in Durham county lasted over eight weeks, in which he visited over 300 apiaries. Foul brood, was, unfortunately, still prevalent.—The balance-sheet showed a slight deficit owing to the poor year.—The report and balance-sheet were adopted. Earl Grey, the late President, having gone to Canada, it was decided to invite Lord Armstrong to fill the office. The vice-presidents and committee were re-appointed, as were also Mr. James Waddell, secretary; and Mr. J. Walton, assistant secretary; and Mr. J. W. Wakinshaw, treasurer. A proposal to make a small addition to the annual subscription of members, and to affiliate with the B.B.K.A., was carried unanimously.

Instructive excursions for members in July next were also arranged as follows:—(1) To Mr. W. Clark's apiary, Gateshead; (2) special excursion and big apicultural field day for bee-keepers and friends to Mr. J. N. Kidd's apiary, on July 8. A special committee, consisting of Messrs. J. N. Kidd, T. Gardener, W. Clark, W. Armstrong, J. Smith, and H. Harmer, was appointed to arrange details of excursions and also for honey show in October, with Mr. J. P. Walton as acting secretary for same.

An address on "Section Honey for Show" was read by Mr. J. E. Walton, and an interesting discussion followed.—Jas. Waddell, Sec., Alwinton.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Confinement in Winter Quarters.—Chas. Mitchell, from Ontario, Canada, writing in the *American Bee Journal*, says his eighty-five colonies of bees were in winter quarters 155 days, or five months and five

days, without a single flight, during the winter of 1903-4, and all but one colony came through safely. He never loses any sleep over the bees wintered out-of-doors, and seldom has any loss, while many neighbours have lost 75 per cent., and some all their bees. After long experience he has decided that if bees are properly put away for winter they can just curl up and wait till spring comes. Some of his colonies were hard to waken in the spring.

Federation of Bee-keepers.—We read in *L'Apicoltore* that on October 30 last a meeting of Italian bee-keepers was held at Ancona, at which it was decided to form a company to be called "Federazione Apistica Italiana," under the presidency of Professor Bernardo Vincenti, for the sale of apiarian produce, and to make the excellent Italian honey better known in the European markets. The competition in the country is so great that the prices realised are unremunerative, and it is thought that by bee-keepers uniting better prices can be realised. The liability is not limited, and it was decided to commence business when five hundred shares had been taken, which it is stated had not yet been done. Signor A. Capponi also asks that the import duty on honey should be raised from ten lire (eight shillings) to thirty lire (twenty-four shillings) the quintal (110¼ lb. Av.).

Flies in Bee-hives.—F. Thener relates in the *Bienen Vater* that he examined a hive of a friend whose bees had died out in the spring, and in which the dead brood was brown and foul. In addition to the dead bees he found a great many small flies which he was not able to secure. However, as there were plenty of chrysalids of two distinct forms, he had no difficulty in rearing a number of these flies. They turned out to be *Blepharoptera serrata* and *Phora pulicaria*. The first is usually found in hives whose bees have died out, where they breed in the decaying brood, and which serves as food for the young larvæ. This fly does not affect live bee-brood, and is harmless. The second, however, is related to *Phora incrassata*, which is known as an enemy of bees, and on whose appearance the brood becomes brown and foul, because the larva of this fly eats into the bee-larva and kills it. Herr Thener thinks probably *Phora pulicaria* may act in the same way, and this might account for cases of dead and rotten brood, which cannot be put down to foul brood.

Artificial Honey.—We find the following in the *Berliner Backer- und Konditorzeitung*:—"A new invention has recently been brought out. Formerly one purchased honey either pure or more or less adulterated, for which eighty pfennigs to 1.20 marks a pound was paid. Since the invention of Dr. Oetker one finds in commerce a product in the form of a powder, which is sold under the name of 'fructin.' The contents of one packet (which is sold at forty-five pfennigs a pound) is treated with 150 grammes of water, and this yields from 600 to 650 grammes of table honey of finest quality. A pound of this artificial honey, therefore, costs thirty-seven pfennigs." It is stated that the flavour of this fructin honey is very fine, and it is often preferred to highly-flavoured natural honey. It is also said to crystallise or set hard like real honey, which is brought forward as a proof of its similarity to genuine honey. We doubt very much if this artificial product has the same properties or value as pure honey, and should not be surprised to hear that it had some connection with our enemy, glucose.

Bees Transporting Eggs.—We find an interesting observation in the *Badische Biene* by M. Gerathwohl respecting bees transporting eggs from one cell to another. He says that during one of his lectures a caged queen had been introduced into a queenless hive. The proprietor forgot to release her and left home, leaving the poor queen in the cage for three weeks. On his return home great was his surprise to find the queen quite well, and walking about quietly in her cage. But what surprised him most was that in a diameter of six inches round the cage the cells were found occupied by eggs in their normal positions, some upright, others inclined, and others already hatched and developing into workers. The bees had, therefore, carried the eggs from the cage to the nearest cells.

Bees in China.—In a book recently published called "A Yankee on the Yangtze," the author, W. E. Geil, writing from Tchae Shin, says:—Continuing the journey, we passed several houses where bee-hives were hung outside. The hives consist of wooden boxes or baskets daubed with mud. New Year's mottoes were on them, wishing great prosperity to the King of the Bees. The honey of Northern Yunnan has the reputation of being the best in all China." The book is extremely interesting, and is quite worth reading.

Braula Coeca, or Bee Louse.—Otto Hochheim states in *Die Deutsche Bienenzucht* that he uses naphthaline to get rid of these parasites. He powders the naphthaline and spreads it on a piece of cardboard, which he places on the floor-board in the hive in the evening. The next morning he generally finds all the parasites fallen on the cardboard. He does not leave the naphthaline in the hive longer than one night, so that he has never found brood injured.

Repairing Old Combs. — The editor of *Biene und ihre Zucht*, Herr Roth, says that bees take reluctantly to old combs that have had the cells removed and in which

only the foundation remains. He tried the experiment by cutting off the cells to their bases and found that when the bees were forced to take to these foundations, the combs they built upon them were very irregular, because the old combs have frequently small holes in them, and, even if the bees close these holes, the cells cannot be made uniform. In removing the cell walls, the mid-rib is also damaged, and this also causes irregular cells. The bees will only work on such foundations during an abundant flow of nectar, and will not touch it at other times. In every way, therefore, it is more advantageous for the bee-keeper to melt these old combs and use manufactured wax foundation.

ERRATUM.—In "Reviews," on page 118 of our issue for March 23 (fourth line from top of second column), the word "blastopore" was by a printer's error made to read "blastopon re."—[EDS.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

WHITTLING DOWN THE STANDARD FRAME.

[5866.] Nowadays, when the cry of many good bee-keepers is that our standard frame is too small, and that we might (some say *would*) secure larger quantities of surplus honey with a deeper frame, it becomes us to take care that we do not allow the present one to be gradually whittled down. This process of nibbling it has been going on for years without much notice being taken of the changes produced, and no protest being entered against such an unwarrantable action on the part of manufacturers. With many, the side-bars, originally $\frac{1}{4}$ in. thick, have been "strengthened," I suppose, until they they are now found $\frac{1}{4}$ in., $\frac{3}{8}$ in., $\frac{1}{2}$ in., $\frac{5}{8}$ in., and even $\frac{3}{4}$ in. in thickness. This action has lessened the size of comb, and thereby reduced the cell-area, which, of course, results in less space for storing honey and brood-rearing.

Then the bottom-bar of standard dimensions should be $\frac{1}{8}$ in. in thickness and $\frac{7}{8}$ in. in breadth. This has now been altered till we have bottom-bars at least $\frac{3}{8}$ in. thick, and $\frac{1}{2}$ in. in breadth. I do not know if the narrowing may be justified, but the addition of the extra thickness has compelled the manufacturers to shorten the side bars by the same amount, and this again has cut off cell-space along the bottom of the comb, so that we have less room for honey and brood. If there is a strengthening of the frame, it is at a sacrifice of comb area; rigidity of the fabric has been secured by a lessening of its efficiency.

Of late, an agitation arose to alter the top-bar. A few wished to change it in both breadth and thickness. Many would have no objection to its being widened, if it could be shown by convincing argument that the game was worth the candle, but the sporadic spurt given the discussion by one or two did not carry full conviction, and failed to obtain such a general consensus of bee-keepers in its favour as would carry the proposed change to full fruition. Something like a miniature revolution was proposed in regard to the thickness of the fabric. Originally $\frac{3}{8}$ in. thick, it was proposed by some to increase it to $\frac{1}{2}$ in. or $\frac{5}{8}$ in., and some even would go the length of having it $\frac{7}{8}$ in. in thickness. This could only be done in one of two ways. First, by making a top-bar of the altered thickness, which would necessitate a change in the construction of all hives and make the frames now in general use a danger and a nuisance when used alongside the new, because all supers would fail to be efficient with the mixed frames; secondly, the bar could be partly thickened. But it will at once be seen that this innovation would still further reduce the comb area by deducting one or more rows of cells from the top of the comb in the frame. The question arises, would it fully secure the rigidity and strengthening of the whole fabric, which its advocates maintain? The strength of a bar or chain is the strength of its weakest part or link. The part of the frame on which super area weight mainly rests is that very part which it was proposed to leave as it is at present. Therefore, I fail to perceive what great benefit would be derived from the desired change.

Some would further plead for an increase in the space at ends of frames. At present $\frac{1}{4}$ in. is looked on as sufficient for all ordinary manipulation. But some would like it increased to $\frac{3}{8}$ in., with the idea that they secure more freedom in lifting and replacing frames. All the benefit I can see likely to arise is that we would have more roughness and carelessness in handling frames, and a consequent loss of bee-life—not a desirable desideratum. In seeking for change, here is another whittling down of comb-area, for with most, in preserving uniformity, the additional $\frac{1}{8}$ in. space at each side would be obtained by pushing in the side-bars

(*Continued on page* 166)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Turner sends the following helpful "notes" of his bee-experiences, which need no addition from us:—

"I commenced bee-keeping on the modern system in the spring of 1897, having before this kept only a few stocks in straw skeps. I knew nothing whatever at the time about the management of frame-hives, and having no friend to help me, my first year was naturally a failure. In the following year, however, I began taking the BRITISH BEE JOURNAL and bought a copy of the 'Guide Book' and to these I owe any success I have since met with. My start on modern lines was with two frame-hives, and since then I have each year added two or three new ones till my apiary now numbers twenty-six colonies.

"In February, 1900, I married and became tenant of a cottage with a garden and a small field attached, the latter being sheltered on the north side by a thick wood, as seen in the photo. The hives seen in the foreground are in the garden and are worked for sections only, while those in the distance, arranged in a line under the shelter of the wood, are kept exclusively for extracted honey and raising young queens.

"My occupation as horseman on a farm takes me from home during the best part of each day, so a great part of the bee-work is done by my goodwife, who is a real bee-man's helpmate. Indeed, I may say that without her help bees would be very little use to me. At the start, having determined that I would do my best to make a success of bee-keeping, I took advantage of the chance offered by the Essex B.K. Association of allowing Suffolk bee-keepers the privilege of membership and joined at once, and at an examination of candidates held in 1903, I was successful in gaining my third-class certificate. I have also since then done a bit in the way of exhibiting, and last season won in prizes twelve firsts, two seconds, and one third. One second prize was won at the 'Royal' Show, the others were mostly secured in our own county of Suffolk. I also got a v.h.c. in open class for single 1-lb. jars at Cambridge last year. During the busy time when swarms are coming off, I am frequently at work at 3 a.m. getting things in order and returning swarms. This is especially the case on Monday mornings, as I never care to do on Sunday what can be put off till next day, so the Sunday swarms are left in the hiving skeps till next morning. My present experience is that hives worked for sections will persist in swarming, but I am hoping that with patience and perseverance the difficulty may be lessened, if not overcome. Another bee-experience has proved to my satisfaction that 'early to bed and early

MR WALTER TURNER'S APIARY, LAVENHAM, SUFFOLK.

to rise makes a man healthy,' but as to 'wealthy and wise' I must leave that out for the present; nevertheless, we are contented, for the profits from our bees bring us several little pleasures and comforts which we could not have without them.

"The figures seen in the photo are those of myself, along with my father and son. For my father, I may say he has hived many a swarm into the good old skep during the last forty years, but now admits freely that the frame-hive is the best. He is not at all nervous when lending a hand with a heavy super or helping in the usual bee-work.

"This past bee-season of 1904 was a record one with me; two or three of my hives yielding over 100 lbs. of surplus, but the others lowered the total by swarming. In closing these 'notes' I would like to impress upon all young beginners to 'make haste slowly' in bee-keeping. Study your 'Guide Book' in winter, and in your work do not depart from its teaching by trying 'improvements' (?) of your own. Our cousins over the water may write nice things about 'spreading brood' in spring, but remember their climate is not exactly like ours, and if you try their plan, as I did myself, you will be very likely to regret it.

I conclude by wishing all brother bee-keepers may have a record harvest in 1905.

("*Among the Bees*" *continued from page* 164.)

that distance further than they are at present.

Some Other Frames. — Close-ended frames, or those with the ends partly closed, never seem to have caught on in this country, but in America a large proportion of those used are "Quinby" close-ended, or "Hoffman" partly closed. Many others are spaced by nails or staples, although the majority, perhaps, use unspaced frames. In this country we have got ahead of all these contrivances of thirty years ago, and on the question of spacing are greatly in advance of these old-world devices. The most popular frame on the other side is, perhaps, the Hoffman, but the war of words now going on in regard to it shows it has its demerits as well as its merits. Some of the most forward bee-keepers condemn them as faulty, and one leading expert and large apiarist states that, out of 20,000 frames manipulated on his tour, not ten per cent. were found in a proper condition for easy handling. On the contrary, another large bee-keeper, with about 4,000 hives, has discarded all others, while a Cuban bee-farmer with well on to 100,000 frames in use, says he would have no other. Perhaps location may have something to do with it. Where propolis is abundant, it makes them semi-fixtures. This was the chief fault found with them in this country, and the demand became so small that dealers ceased to stock them. Some, at least, found them dead lumber on their hands.

The Weather.—Of this interesting subject, during the first three weeks of April, I have nothing good to say. After getting a foretaste of spring during the latter part of March, we have had no bee-weather since the advent of April. I do not think that for these twenty one days bees have had one single flight, not to speak of pollen-gathering or honey-storing. The brood-nests, I fear, are contracting rather than extending, and a change of weather is urgently required if we are to secure strong colonies in time for white clover.—D. M. M., Banff.

NOTES FROM SOUTH WALES.

WINTERING BEES WITH ROOM OVERHEAD.

[5867.] I send a few notes regarding the bee-season of last year, and the prospects for 1905 in my apiary, which latter is located in the Vale of Towey, South Wales.

The early spring and summer of last year were cold and wet with us, and it was not till July that the bees had any chance to gather from white clover, which is the main source of honey here, but mine averaged from fifty to sixty pounds of good honey per hive. We have had no honey-dew here for six or seven years past. Prices were very low, a good deal being disposed of at less than sixpence per pound, in bulk, for honey of fair quality. My own was sold in 1-lb. tie-over jars at 10d., and for screw-cap jars a shilling each. We had a quiet year with swarming on the whole. This year bees have been busy pollen-carrying on every fine day since the first week in February, and the black thorn began to bloom early in April. The small blue tit is a great enemy of our bee here, picking them off at the hive entrance when the ground is covered with snow. The house sparrow also does the same with early drones, catching them when on the wing about the hive entrance, and carrying them away to feed their young.

Wintering Bees.—The best and safest method by far of wintering with me is to leave a crate of shallow-frames on top-bars of the brood-chamber; if two or three of the frames have sealed honey in them, all the better. I leave only a queen-excluder between body-box and shallow-frames, then cover the top with plenty of warm coverings. Last week I went through the whole of my hives, and those that were packed as above described were in excellent condi-

tion, and more forward than those packed well but without the shallow-frame box overhead.

Wintering Driven Bees.—On September 20 of last year I put two driven lots of bees in an empty straw skep. They were fed every day for three weeks with warm syrup, and by that time the bees had filled the skep with comb to within three inches of the floorboard; I then stopped the feeding. In February last I put on a good cake of soft candy above the feed-hole cut in top of skep. They were left thus till the 6th of this month, when I found the cake had gone, and bees had built three combs in the space where candy had been, and every cell was full of what I thought was thin sugar-syrup. The bees, however, were in extra good condition, and will probably swarm early in May.

The other day I was examining a skep for a friend, and on reversing the hive, to our surprise we found a well-made mouse-nest built right up in the centre of combs, but no bees.

Best wishes and thanks to our Editors for their keen work, and hoping we shall have a good season for the bees this year. —D. Davies, Abergwili, Carmarthenshire, April 10.

P.S.—I am thinking of trying one of the new swarm-catchers devised by Mr. Thomas, of Llandilo. Will you please give your opinion of it? I understand you have one for examination.

[We are glad to hear of your proposal to try the swarm-catcher referred to, having seen it and formed a good opinion of its merits. But it is always best to wait a practical trial of swarm-catchers, as being the real test without which no one can be sure how it will work out.—Eds.]

LOSS OF QUEENS.

[5868.] When experts differ, who shall then decide? This question was suggested to me on reading Mr. Bocock's "Notes" (5863, page 156). I have had an almost identical experience to the one he mentions. One of my stocks showed "all well" in March, and a subsequent examination about the same time as Mr. Bocock's revealed neither queen, eggs, nor brood. As it was a prosperous colony and the queen a young one (1904), I was rather puzzled in view of a statement in your pages that. "after mating, a queen never leaves the hive except when accompanying a first swarm." Now, however, Mr. Bocock has advanced another theory together with a suggested explanation. I would venture to assert that this theory will be new to a good many, and therefore does not the old saying that "bees do nothing invariably" bring us back to my opening question? May we have a little more light on this subject from some of our friends? I enclose name for reference and sign—Wilts, April 23.

CUMBERLAND B.K.A.

THAT VOTE OF CENSURE!

[5869.] The enclosed Press cutting reporting one of the annual meetings of above association at Keswick, shows that your shrewd guess on page 134 of B.B.J. of the 6th inst. was very near the mark, for at this, the principal meeting, there were present six members, the hon. secretary, and his assistant. This skeleton of an association numbering 540 members gravely proceeded to pass a vote of censure on the Bee Journal. Now "this sorry piece of business" is being palmed off as the work of the Cumberland Bee-keepers' Association. Readers can draw their own conclusions. *Verb. sap.!* I send name, etc., for reference, and sign—"A Scot."

[We are obliged for Press cutting sent, apart from your just criticism thereof, because it displays an unaccountable want of accurate information on the part of the Rev. chairman who put the vote of censure to the meeting, and a curious lack of candour in Mr. Saunders, who allowed the resolution to be put in the form given. Our report of the four annual meetings of the Cumberland B.K.A., which appeared on page 133 of B.B.J. for April 6 (written by Mr. Saunders himself) states that the resolution passed at all four meetings was a vote of "strong disapproval on the British Bee-keepers' Association." But the vote put at the meeting to which our correspondent refers was "against the Editors of the British Bee Journal," the B.B.K.A. never being once mentioned in the long report given. It thus becomes plain that the chief speaker at the meeting was entirely uninformed with regard to the facts of the case he was dealing with, and, in consequence, was led to unnecessary confusion on the subject, seeing that the "Editors of the British Bee Journal" have no more to do (as editors) with the proposed foul-brood legislation than the Rev. chairman himself.—Eds.]

PRICE OF HONEY.

[5870.] Your correspondent, "A Middleman, Beds," (5856, page 147), misconstrues what I said in my letter appearing in B.B.J. of March 30. My words were: "With regard to the honest middleman, they as a class seem to act as though they had a sort of Divine right to get rich anyway, anyhow," etc., etc. I would now

add a line to say that, before altering my views, I should like a few questions answered:—Firstly, in what corner of Bonnie Scotland does the busy bee gather finest Scotch honey, which is packed in barrels and offered for sale in tons "at 4d. per pound" by a London firm? (*Vide* B.B.J., February 9, p. 51.) Secondly, I ask, has our Scotch friend Mr. McNally got an answer to his request for the name of the county where the "finest Scotch honey" was gathered, and obtained his "ton of honey" from the firm in question, according to his wishes as given in B.B.J., February 16 (page 61)? If so, it might be well to have the information given in print? Otherwise, I shall continue to think that some honest "Middleman" knows more about this particular brand of "finest Scotch" honey than any bee-keeper does, be he Scotch or English. The "one eye" and "sordid mind" attributed to me certainly so far fail to see where the fair dealing comes in—i.e., in this case.—I sign as before—CAMBS. BEE-KEEPER, April 17.

AN APPRECIATION.

DO DRONES LIVE OVER WINTER?

Brantford, Ont.,
April 5, 1905.

DEAR MR. COWAN,—The second edition of your work on "The Honey Bee" has reached me. It is excellent, and should, I think, be in the hands of every practical bee-keeper. I know of no work in this direction which contains as much information for the price. I am anxious to get some literature which bears upon the pollination of blossoms and the methods of designs in nature to secure cross-fertilisation—if illustrated, so much the better. Of course I know something about this, but would like a thorough work or works on the subject. I can read German, and, with some difficulty, can manage French. If you would kindly order such to be sent to me, up to the value of, say, five dollars, if they are good, or less if it will cover, I will send the money upon receipt of account. The cheaper editions of such literature will answer my purpose. Some time ago an article appeared in the *Irish Bee Journal* in which the writer stated that a drone could not live through the winter, as he had no honey-sac. I said at the time this was not correct, as drones had been wintered by me many times. This spring, after placing our 349 colonies of bees on their summer-stands after a confinement extending from November 18, 1904, to April 2, 1905, I pointed out flying drones to Mr. Morley Pettit, Belmont, Ontario, and my son—a number of them, in fact. I also find that where the bees are taken to fall-pasture—such as buckwheat, golden rod, or aster—the honey-flow lasting into the first days of September, there are drones in the hive all winter, and no sign of a queenless condition. In fact, with a honey-flow continuing so late, bees quite often do not kill off their drones until the following spring.

Bees have wintered well in this portion of Ontario, and—unlike last year—the clover is looking very well. The first pollen (from soft maple) was gathered by our bees on March 31, just one month earlier than last year. If the above would be of interest to readers of the B.B.J. you might put it in. — Yours very truly, R. F. HOLTERMANN, Brantford, Ontario, April 5.

[As the above reached the office after our senior editor had sailed for the U.S.A., we have availed ourselves of Mr. Holtermann's invitation to publish his letter in first issue, in order that Mr. Cowan may see it when this number of B.B.J. reaches him after landing in America, and reply direct to his correspondent, thus saving time.—W. B. C.]

Obituary.

MR. W. H. IDIENS.

I much regret having to announce the death of Mr. W. H. Idiens, of Wolverhampton, a very worthy member of our craft, who was not only a life-long lover of his pet hobby, the bees, himself, but comes of a family who have been bee-keepers for generations past. He was a firm supporter of the BRITISH BEE JOURNAL, and he has more than once shown me with pride volume I. of our JOURNAL, in which his interest was maintained to the end. Mr. Idiens, though a comparatively young man, had been enfeebled for about two years owing to severe attacks of gout, and his business as a decorator had in consequence been carried on mainly by his two sons. Early one day in March last our friend tottered into the garden to feed his bees, when he was seen to stumble and fall. He was taken into the house, but never spoke again, and died next day in the presence of his loving, devoted wife. It was my privilege to have been a close friend of Mr. Idiens; indeed, he and myself were for many years as brothers. We laid him to rest in Tettenhall churchyard, Wolverhampton, amid the sorrowing regrets of those that were dear to him. The bee-keeping community can ill spare such good friends of the craft as our late friend. Through him many made a start with bees, and from him received willing instructions and advice—myself among the number.—T. J. HORSLEY, Merridale, Douglas, I.O.M.

Echoes from the Hives.

Alderley Edge, Cheshire, April 24.—Cold, chilly winds prevail mornings and evenings. Stocks generally good, some having six combs with brood on both sides. In many instances food very scarce, although damson, plum, and pear blossom is plentiful. I have already had to pour warm syrup into combs of colonies on Thursday last, to save them from starvation.—Jas. Waddell, Expert (on tour in Cheshire).

Queries and Replies.

[3719.] *Bee-keeping for Clergymen.* — I have just come into this neighbourhood, where there is plenty of heather, and should like to start bee-keeping. I have been reading your "British Bee-keeper's Guide Book," and it is evident to me that I ought to take some practical lessons, and, if possible, obtain some skilled help and advice at first. May I ask how I can best obtain this? I am curate of the parish, and therefore could hardly spare time for anything like a course of lessons in apiculture. Nor could I afford any considerable outlay, as I am a married man with a family, and am dependent on my stipend of £150 a year. My intention is to be able to instruct and supervise the older members of my family, who would be able to give the time that I could not spare. Is there any one near here to whom I could apply? Your reply will oblige—A Country Curate, April 9.

Reply.—There is no need for taking lessons in apiculture in order to become a successful bee-keeper. The great majority of those who make bee-keeping pay have had no teacher beyond a good book on the subject, which you already possess. We could name someone in your own county to whom a visit would no doubt be helpful and instructive, but for the rest we advise beginning in a small way, and after even a single season's trial you might be able to form some opinion on the adaptability of yourself or members of your household with regard to bee-keeping as a source of increase to income. A short time might convince you one way or other so far as regards taking up bee-craft. But we may say there are clergymen among our most successful bee-keepers.

[3720.] *The Law of Parthenogenesis.*—On page 145 of "The Honey Bee" we read as follows:—"If a black queen mate with an Italian drone, the females, both workers and queens, will be crossed, while the drones will be pure blacks. It is, therefore, evident that the drone has no father and proceeds only from the mother." Has he a "grandfather"? In other words, does the theory of parthenogenesis transmit the influence of grandsire down to "grandson" through the medium of the mother? This question arose out of a discussion on queen-breeding, and it was decided to submit it to our Senior Editor for reply.—J. Gray, Expert on Tour in Lancs.

Reply.—As intimated on page 141 of our issue of the 13th inst., Mr. Cowan has left this country for a tour in the U.S.A. and Canada. It will, therefore, be some time before his opinion can be had on the question put. There cannot, however, be much vagueness in Mr. Cowan's work on "The Honey Bee," seeing that the views of every authority which are worth having are fully given in the chapter on parthenogenesis. Therefore, what cannot be gathered on the subject after reading pages 143 to 152 is hardly worth knowing.

[3721.] *Adding Frames of Foundation in Spring.* — Will you kindly answer the following? 1. I have two "W.B.C." hives; one now has six and the other seven frames of bees. When, and in what position in the hive, am I to insert frames of foundation in order to fill the hives up to the usual amount of ten frames? 2. Should the bees be fed when new frames are put in; if so, kindly say how much and how often?—Subscriber, Dorset.

Reply.—1. If there are four seams of bees covering that number of combs on both sides, a frame of foundation may now be inserted in centre of the bee-cluster; then, if weather keeps warm, a second frame may be given (next to the first one) about a week later, and so on till the hive is fully occupied. 2. If there is not plenty of food in store the bees must be fed with, say, a pint of syrup per week till honey comes in from the outside.

[3722.] *Moving Bees Short Distances.* — Will you please inform me concerning the removal of two stocks of bees, whether it would be advisable to move them a distance of three-quarters of a mile from where they are now? The reason for compulsory removal is that the hives have been standing for some time in a garden attached to an empty house, and the house is taken again along with the garden. I have two other stocks in the village three-quarters of a mile distant, and would like to move them to my own place, if it is not too late in the season. Awaiting your kind reply.—W. H. B., Kettering, April 24.

Reply.—It certainly is rather late for removal, as bees have been busy on the wing for some time now. However, there

will be little or no risk if all four stocks are moved together on to the stands at your own place, and a small branch of a tree is laid on each alighting-board close to entrance so that the bees will have to make their way through the twigs in taking their first flight from the hives. This will cause them to notice the change, and take note of the altered surroundings. The twigs may be removed after bees have flown for a few days.

Bee Shows to Come.

A nominal charge of 2s 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 15, or at extra fees up to May 29.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston.

Notices to Correspondents & Inquirers.

H. K. (Wilts).—Mutilated Drones.—The curious appearance regarding which you inquire is simply a portion of the generative organs of the dead bee sent.

G. M. D. (North Devon).—Diagrams of the B.B.K.A.—We regret to say the "key" which goes along with the diagrams published by the B.B.K.A. is not obtainable by itself. In fact, there are very few copies of the full set of diagrams to be had.

T. E. P. (Folkestone).—Doubling and Storifying.—If weather is settled and warm—with honey coming in well—and both colonies to be dealt with are strong in bees, operations in your part of the south may begin about the second week in May. The main risk to guard against is to avoid giving frames of brood to any but a very strong colony, because a sudden return of cold weather might cause the death of much young brood in the upper combs, through lack of bees to cover and keep it warm.

G. T. W. (Wimbledon).—Mounting Objects for the Microscope.—A series of papers from the pen of our Senior Editor appeared in the B.B.J. some years ago, wherein the subject was very fully gone into. We might supply some of these back numbers if thought desirable, but it could not be dealt with briefly by way of reply in this column.

F. J. (Mountmellick).—Uncapping Combs for Stimulating.—Sealed combs of food may have the cappings bruised—or slightly broken—with little or no disturbance to bees, by simply raising the quilt a little and passing a stiff knife over the surface of cappings to slightly expose the food. The bees will do the rest. No lifting of frames is needed.

J. C. (Bedford).—Mouldy Combs.—1. If combs are old and very mouldy, we should melt them down for wax, if worth the trouble; otherwise burn them. The bees will be more profitably employed in building out foundation into new combs than by cleaning out old mouldy ones. 2. The hon. sec. is Mr. C. N. White, St. Neots, Hunts.

Honey Sample.

WM. JONES (North Wales). — Honey for Feeding Bees.—It is impossible for us to name the source of honey from an apiary in the West Indies. The sample sent is like some we have seen from Chili, the quality being coarse and rank compared with good British honey. It would do all right for making soft candy if mixed into a stiff paste by adding castor sugar.

Suspected Combs.

"DOUBTFUL" (Derbyshire).—The samples (three) confirm our opinion as expressed last year. There are no visible signs of disease in brood occupying the sealed cells of comb sent; the larvæ have nearly all reached the chrysalis state, and would no doubt have hatched out in due course if kept warm. Most of the combs are apparently old, and the queen is probably old too; we would, therefore, take steps to renew both queen and combs if bees are to be utilised.

W. T. (Herts).—There is no disease in comb sent.

A. W. S. (Suffolk).—There is foul brood of old standing in a few cells of comb, but the disease appears to be not of a virulent form, judging by sample. If, however, the bees are "not strong," as stated, we should not waste time in attempting to cure; better destroy them, along with the old combs.

**** Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

MOORE'S Red Clover Strain of ITALIAN BEES. I have a few strong stocks to offer in "X.L. All" Hives, at 30s. each. Also an empty Ford Wells Hive and Wells Hive, 15s. and 10s. 6d. each. Splendid condition. No disease.—GEARY, Barwell, Hinckley.

ORDERS WANTED for NATURAL SWARMS. May, 12s. 6d.; June, 10s. 6d. Guaranteed healthy.—W. JACKSON, The Wrythe, Carshalton, Surrey. G 95

Editorial, Notices, &c.

CUMBERLAND B.K.A.

"THAT VOTE OF CENSURE!"

Mr. Geo. M. Saunders writes with reference to the letter on page 167 last week, headed as above, and as hon. secretary of the Association in question, asks us to "correct the general false impression" given in the editorial footnote which follows the communication signed "A Scot." We are, in addition, charged with "allowing ourselves to be led astray by an *anonymous writer," etc., etc. Mr. Saunders also asks us to print a good deal besides the words quoted above; but the only points that needs dealing with is the accuracy or otherwise of our quotation from the Press cutting sent us. With regard to this, it seems incredible that a reporter who was present at the meeting in question should depart from invariable custom by altering the actual wording of a resolution submitted to those present. Surely a resolution must be reported *verbatim et literatim*, otherwise it cannot be valid, hence our wonder at Mr. Saunders's failure to correct the proposer of the motion before it was put to the meeting. This was apparently not done; but we are also told in another part of the letter before us that the reporter has now "explained his mistake by pointing out that considering Mr. Cowan's name appeared as Editor of the B.B.J. on its cover, and that he was also Chairman of the B.B.K.A., the distinction you make that the B.B.K.A. and B.B.J. were not, to all intents and purposes, one and the same, was too fine for the general public to understand."

If Mr. Saunders wishes us to accept this "explanation" as that of the reporter in question, we think any unprejudiced man will agree with us in being very short-sighted indeed. We question if the reporter of the local paper had ever heard either of the B.B.K.A and its Chairman or of the B.B.J. and its Editors, and we can, therefore, only suppose that when fully informed on the matter the only explanation possible was the somewhat impertinent one given as his by Mr. Saunders. Anyway, we have devoted more space of late to the affairs of the four meetings of the Cumberland B.K.A. than their importance merited, and the correspondence relative thereto must now be taken as closed.

* Beyond the fact that no communication appears in our journal without name and address being supplied, we may say the anonymous writer mentioned is well known to us, and probably to Mr. Saunders himself. —[EDS.]

ANONYMOUS CONTRIBUTORS.

A question put in our "Queries and Replies" columns this week demands somewhat more prominence than it receives on page 178, because of certain changes being necessitated—as time passes—in the rules for regulating the publication of this journal. We allude to the omission of names and addresses at foot of communications forwarded for publication, and the substitution of initials only where a *nom de plume* is not used.

This course has been forced upon us for several reasons, one being the thoughtlessness of inconsiderate persons in writing direct to contributors with requests for all sorts of information, involving much trouble and worry in certain instances, which has been very justly complained of by some of the gentlemen written to. In other cases advantage has been taken by unscrupulous individuals of the publication of names, etc., for sending undesirable literature to the addresses given.

With the view of stopping this sort of thing we have—not without regret—ceased to print full names, giving initials only, and so much of address as will in a measure locate the communication. In all cases, however, name and address are required as a guarantee of good faith, and where it is desired to communicate with writers, we either obtain permission beforehand to furnish same, or if sealed envelope is sent to this office they will be forwarded.

REVIEWS.

Die Faulbrut der Bienen, by Theodor Weippl, published by Wilhelm Frick, Vienna.

Bakteriologische Forschungen über die Faulbrut, by Dr. R. Burri, published by the Swiss Bee-keepers' Association in *Schweitzerische Bienenzeitung*.

In the former pamphlet of twenty-four pages, Weippl gives a brief survey of the history of foul brood, or bee-pest, and states that since 1893, when bee-keepers commenced to adopt remedies for contending with the disease, it has diminished, and in many cases disappeared, in many of the districts he had visited. In 1892 and 1893, however, the disease was very prevalent, and he attributed it to the fact that these were very bad honey years, which affect bees, just as with humans plague or cholera follows periods of famine, scarcity, or wars. He attributes most of the disease to the ignorance of the bee-keeper, and says it is not really as dangerous as it appears, if the bee-keeper thoroughly understands it, and takes proper

precautions when handling bees and adopts suitable remedies. The author also thinks Bee-keepers' Associations should arrange for courses of lectures on foul brood, like those organised by the Austrian Bee-keepers' Association, at which fifty-seven persons attended, showing that there was a necessity for such instruction. With such instruction, he says, the diminishing disease will soon disappear from the country. He then describes foul brood, and states that there are two forms of it, the mild and the virulent. A number of examples of each are mentioned. The virulent form is produced by the *Bacillus alvei*, and is the same as that known in this country. The various signs of the disease are mentioned, and a very minute description follows, so that it is easy to recognise it. He then gives a description of "mild foul brood, in which larvæ and pupæ are attacked and die just as in ordinary foul brood, but have not the well-known characteristics of this disease. It frequently follows the virulent form, and is probably a milder form. In order to find out if there was any bacteriological difference in these two forms of the disease, he submitted affected combs to Dr. Cohn, the well-known Professor of Bacteriology at the University of Vienna, who, after careful examination, has found that the bacillus in the mild form of the disease, after several cultures, differed from *Bacillus alvei*, and that the two had nothing in common. Besides, in the mild form Dr. Cohn found many different bacilli which always accompany putrefying substances, and it is certain that these are not contagious, and are not the cause of foul brood, but are the result of dead brood, in which they find suitable nourishment. The author's recommendations are to keep colonies healthy, and only to feed with honey, as he does not consider sugar-syrup a proper substitute. He further recommends destruction of badly-infested combs and disinfection by means of the usual remedies, such as corrosive sublimate, formaline, and phenyle.

Dr. Burri's is quite a different work, and it is the result of scientific research, as he is Professor of Bacteriology at the Federal Polytechnic School in Zurich. After mentioning the widespread prevalence of foul brood, which was known even in the earliest times, he gives a history of modern research respecting this disease. It was in 1874 that two Breslau botanists, Dr. Cohn and Dr. Eidam, first discovered, after microscopical examination of diseased larvæ, that these contained a great many spores of bacteria, among which they also found rod-shaped bacteria, then only known as belonging to the vegetable kingdom. It was only in 1880 that Dr. Koch's researches introduced methods by which bacteria could with certainty be recognised and their relation to disease ascertained. In 1885, taking advantage of these methods, Messrs. Cheshire and Cheyne pursued the research, and carefully studied the microbe, to which they gave the name of *Bacillus alvei*, by which name the specific bacillus of foul brood is now generally known. Fifteen years later (1890) Professor Harrison confirmed the conclusions arrived at by Cheshire and Cheyne, and as his researches were made in the Bacteriological Institute of the University of Berne, it showed that the bacillus of foul brood was the same in Switzerland as it was in England. In 1902 Dr. Lambotte, of Liège, thought he could prove that what was supposed to be *Bacillus alvei* was really a very common microbe, widely distributed, and known as *Bacillus mesentericus vulgatus*. Professor Harrison traversed Dr. Lambotte's statements, and showed that it was impossible for the two microbes to be the same, and it was for the purpose of throwing light upon this question that Dr. Burri undertook the work. For this purpose he was supplied with a number of frames of comb containing the disease, and procured from different localities, by the President of the Swiss Bee-keepers' Association. Dr. Burri, in his researches, laid stress on three points: 1. Microscopical examination; 2. Culture of the bacillus; and 3. Comparison with what is stated in manuals on bee-keeping. The direct microscopic examination of the material enabled him to study the progress of the disease, and to differentiate between the rod and spore condition, as well as to note any strange forms which have no connection with the disease. Thus he found in the earliest stages when the larva had not yet changed, mobile rods, and not any spores. For the next stage, when the larva had become brown and completely rotten, and could draw out in an elastic thread, there were a larger number of spores; and in the last stage, when the brown matter had dried up and adhered as a scale to the lower side of cell, it was impossible to form any idea of the immense number of spores; millions were found in one cell, but not a single rod-shaped bacillus. In such combs the characteristic odour of foul brood was absent. The cultures of this bacillus gave negative results, as they remained either sterile or gave poor colonies, or such as were adventitions. He occasionally found *B. mesentericus*, but only in isolated cases, and does not agree with Dr. Lambotte as to this microbe being the cause of foul brood. He concludes that in this case he has met with a new organism, difficult of cultivation, differing from *B. alvei* and *B. mesentericus*. Another series of combs gave quite different results, and in the same cells he found both the rod-shaped bacilli and

spores, which were larger than those previously mentioned. Moreover, the rotten mass had the characteristic odour of foul brood. Cultures were easily made, and from these Dr. Burri was able to determine the microbe to be *Bacillus alvei*, and identical with that described by Cheshire and Cheyne. Dr. Burri therefore comes to the conclusion that there must be two forms of foul brood, one having no odour and the other having a very strong odour. The first he thinks is the one described by Dr. Lambotte, and erroneously called *B. mesentericus*, the other described by the English scientists. The two exist in Switzerland in different localities. Dr. Burri made another observation in connection with the combs which he received, and this was that, accompanying foul brood, he generally found sour brood. Microscopic examination of this showed a number of motionless and sporeless bacteria. In sour brood the larva does not change into a corrupt mass as in foul brood, but becomes soft and covered by the skin which is sufficiently tenacious to allow it to be withdrawn from the cell. He has never found a comb containing sour brood only but this was always associated with foul brood, and therefore he thinks there may probably be some relationship between the two. Dr. Burri concludes that there are two species of bacteria that can produce foul brood—*Bacillus alvei*, described by Cheshire and Cheyne, and a species hitherto unknown and very difficult to cultivate. Before accepting these results as final, many more examinations should be made, although it in a measure corroborates what is said by Weippl, and the contention of those in Germany who had stated that there were two kinds of foul brood—namely, the mild and the virulent forms of the disease.

SHROPSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Shropshire Bee-keepers' Association was held at the Mayor's Court, Shrewsbury, on Saturday, April 16. Mr. Roff King (Chairman of Committee) presided, and among those present were Miss A. Downward, Miss M. E Eyton (Hon Treasurer), Messrs. A. Beale, R. Holland, J. Hammond, W. H. Brown, J. Griffiths, P. Jones, J. Carver, J. Clay, P. Scott, J. Hartshorn, S. Cartwright (Hon. Secretary), etc. In presenting their report for 1904, the Committee congratulated the members on their financial position. It had generally been their unpleasant duty to record a balance due to the Treasurer, but this year, thanks to the liberality of the Horticultural Society, there was a small balance in hand. That, however, although satisfactory as regarded the show, could not be said to be equally so to the Bee-keepers' Association, as all their funds were absorbed in the one undertaking, leaving no fund to support the main object for which they existed—"humanity to the bees." It would, therefore, be necessary for the Association to consider the advisability of asking the Horticultural Society to undertake to conduct the honey-show held annually for many years past in connection with the great Horticultural Fête in "The Quarry," Shrewsbury, offering, of course, to give any assistance that might be required. The annual show of 1904 was very successful, considering the unfavourable season. The entries were as follows:—Open classes, 92; members, 32; artisan members, 20; cottagers, 39; total, 183. The balance-sheet showed receipts amounting to £48 13s. 8d., and a small balance in the hands of the Treasurer. The report and statement of accounts were approved, and the following resolution was unanimously passed:—"That the Horticultural Society be approached with a view to their taking over the show another year entirely." A resolution was also passed giving the Chairman full powers of the Association when using his influence at any suitable time to approach the Horticultural Society with reference to the amalgamation. Mr. Roff King was re-elected Chairman of Committee, and thanked for his past services. Miss Eyton and Mr. Cartwright were re-elected Hon. Treasurer and Hon. Secretary respectively. Her Grace the Duchess of Sutherland was re-elected President, and the Committee were also re-elected. A vote of thanks to the Horticultural Society for their increased donation was also passed.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5871.] Mad-day has arrived in a hurricane, reminding one more of the advent of March than the merrie month of flowers and sunshine. And what weather we had in April! Dull and sunless, with leaden skies, cold north-easterly winds—in fact,

scarcely a good bee-day during the whole month. I do not remember anything like it since 1888. It is to be hoped that May will be an improvement, so that we may report progress in every department of the apiary before its close.

Bee goods should be ordered at once, if not already done. A constant supply of water should be provided for the bees near their hives. Feeding should also be attended to where required. Strong stocks with only a short supply of food in store will not make satisfactory progress unless their present needs are supplied. But with timely help, along with suitable bee-weather, they will make rapid headway at this period of the year. Therefore, any stock known to be short should have a bottle of syrup given twice a week until honey can be had outside.

Those of our friends who have not hitherto kept a hive-record of some kind I would advise to make a start now. A piece of card in each hive, giving the age of queen, date of examination, and cleaning of hive, then as time goes on the date of supering, and removals of the surplus honey. These short notes are useful for reference at the end of the season when balancing up accounts for the year. I have used cards for many years. I tried a book one year, but gave it up within a week. One cannot carry a book about the apiary very well if the weather is showery or the wind blows rough; but the piece of stiff card can be handled and entries made, and again dropped on the top of brood-nest even if it is raining. Anyone can arrange and use their own ideas as regards abbreviations to suit their individual fancy.

Swarms.—In early, sheltered districts we shall hear of swarms having issued towards the end of the month, and these must be provided for as they come off. If sold, and to be sent on a journey by rail, I advise that every swarm, on reaching its destination, should be fed at once. If sent in boxes with perforated zinc ventilation, invert a bottle of syrup over the zinc; and if sent in box covered with canvas or strainer-cloth, the syrup can be spread or sprinkled on the cloth a little at a time. The thousands of tongues will soon clear it up, and this will not only give life and vigour to the bees, but will also put them in the best of humour for transfer to the hive, which latter should be made ready for them before arrival. I always use starters in the brood-combs; but if you wish to establish good stocks for future profit, give full sheets of foundation wired into the frames. "Wiring" certainly prevents sagging or stretching in the foundation. With regard to the number of frames for swarms to be hived on, give according to the strength of the swarm—say, from six or seven, up to the full number. Ten frames are considered a good working size. But if surplus honey is wanted from a swarm this season, do not give more than nine frames, under any circumstances. Also give a bottle of syrup for four or five nights to help the bees in establishing themselves, and facilitate rapid comb-building. These matters attended to, and with good bee-weather, the new stock will be ready for a super in about eight days.—W. Woodley, Beedon, Newbury.

QUEEN-MATING IN "BABY NUCLEI."

[5872.] I have just received the B.B.J. of April 6, and notice the article of "J. M. E." (5850, page 135). I am glad to learn that interest in the "Swarthmore" mating nuclei is awakening in England. These baby nuclei have just passed through a torrent of criticism here in America, and I am pleased to learn that the plan is likely to have a fair trial in the Old Country.

To compare the editorial columns of some of the American bee-journals of two or three years ago with those of to-day one is amazed at the change of sentiment in favour of the "Swarthmore" methods. For instance, an influential journal in its articles of two years ago lost no opportunity to condemn "Swarthmore" and his methods, but in a recent issue I am pleased to read the following editorial commendation:—

"This little book of Mr. Pratt's is worthy of careful reading, not only on the part of the queen-breeder, but of the producer of honey as well. And that reminds me that bee-keepers who produce honey only, tell me at conventions that they cannot afford to rear queens. In this I think they are mistaken. By the new plan one needs to break up only one or two colonies at most, and rear all the queens he can possibly use for the homes and out-yards in a comparatively short time, and at a very small expense. I verily believe that the day for the use of two-frame nuclei standard Langstroth size for mating queens, has gone by. It is waste of money and time to use six times more comb surface covered with bees than is absolutely needed for doing the work."

The fact of the matter is, bee-keepers are now giving the plan a fair trial, and the change of heart is due to the success they are achieving in the practical use of baby nuclei. British bee-keepers, I am quite sure, will not condemn without trial; there really is no fear of such a frightful outcome as "J. M. E." depicts if the

(*Continued on page* 176.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We are sorry not to have included in the quaintly picturesque cottage and bee-garden seen below the figure of its owner, Mr. Cooper. His absence, however, is explained in the interesting "notes" sent, which read as follows:

"In response to your request for a few notes of my bee-experiences, I may say, Fortune favoured me in infancy by dumpine me into a bee-keeping family. Some of my earliest recollections are naturally entwined around the old-fashioned straw skep and its busy inhabitants. Among the first things I have in mind, was an awful dread of the bees' 'pointed tails,' and an intense fondness for their honey. I also remember feeling much pity for the poor little labourers whose fate it was to be put to a cruel death after having worked so hard all the summer. That feeling, however, soon gave place to joy, when, as the youngest of the family, I was supplied with a hunch of bread and a spoon, together with a piece of the delicious honey-comb cut from the skep, making up a veritable feast for myself as the youngest of the family.

But, although brought up in such an infected atmosphere, I never really caught the bee-fever till the summer-time of five years ago, when I suddenly came into possession of two frame-hives, along with a few skeps which belonged to my father. Then it was that my difficulties began. I knew nothing whatever of bee-management and had never even seen the inside of a frame-hive. However, my first 'operation' was to put on a rack of sections, and in removing the quilt for this purpose I found that the latter was securely fastened down to the top bars, consequently, I did my best to replace it the same way. Do not smile please, when I confess that I stuck the quilt down by melting some bees-wax and running it round the edges while hot! Then about a month later came the great day of all; the sections were filled with honey in comb and must be taken off. So, after fixing myself up with veil, thick gloves and spats, I approached the hive in fear and trembling just after sunset, and after about ten minutes' puffing of smoke in at the entrance, the result may be better imagined than described. I need only say that after about an hour's exciting work by candle-light, and sundry 'accidents' to myself and to the bees in the way of 'give and take,' I had by me eighteen sections—mostly broken—and hundreds of dead bees. But better days were in store, for soon afterwards a friend gave me a copy of the 'Guide Book,' and by following its directions, I was soon put on the right track. About the same time

MR. H. M. COOPER'S APIARY, THORLEY, YARMOUTH, ISLE OF WIGHT.

I commenced taking the 'B.B.J.,' and afterwards the *Bee-Keepers' Record*, which I find very helpful. I make all my own hives and all parts of same are interchangeable; my apiary has increased till till it now contains twenty-four stocks all in frame-hives. My average yield of honey per year for the last four years has been rather over 60 lbs. per hive, the best return from a single stock was in 1903, when one hive produced 155 lbs. of surplus. Altogether in the four past years I have taken about 24 cwt. of honey, mostly in 1 lb. sections, and have found a ready sale for these at 9d. and 10d. wholesale. Much to my regret, I have lately had an outbreak of foul brood in several hives, and acting under the advice of our county expert, I am trying to combat this enemy of all bee-keepers, but so far, have not met with complete success, though I am hoping for the best.

"Being a firm believer in copious autumn feeding I let the bees alone as much as possible in the spring, and as yet have never lost a colony through bad wintering, while my stocks are always very strong and 'fit' in May. There is not much to be told about the photo itself, more than just to mention that the apiary is very prettily and favourably situated on a slope facing south, and well sheltered from the north and east. The skeps shown in the foreground are now transferred into frame-hives. The reason that your humble servant has not spoilt the picture with his appearance therein is that he was, perforce, occupied in manipulating the camera from an exalted position on the top of a water-butt."

("*Queen-Mating in 'Baby Nuclei,'*" *continued from page* 174.)

directions in the book, "Baby Nuclei," by Swarthmore, and "Cell Getting," his late work, are carefully and intelligently followed.

As to the efficiency of queens reared by this plan, it might be well to state that the finest bees in America, those which have taken first prizes at international shows, and many that are now rolling in big crops of honey; those which are proving hardy and causing comment from all beedom because of their extreme prolificness, are in the main reared artificially in cages and mated in baby nuclei.

In closing his well-written criticism "J. M. E." recommends adhering only to strong nuclei. To all who prefer this I would suggest a reading of the little book "Increase" by "Swarthmore," in which are outlined methods of practice which will fully meet the requirements of all who are not yet quite ready to accept the text of "Baby Nuclei."

It is not "Swarthmore's" desire, I am quite sure, to force his methods upon bee-keepers anywhere; nor does he consider them perfect by any means (I happen to know that he is still experimenting); he simply presents his plans to bee-keepers for trial, and, if found desirable, for their adoption. There is a progressive spirit in all countries and in all people which cannot be held down: it is to this class "Swarthmore" appeals.—JOHN M. HOOKER, Philadelphia, April 17.

BEES DESERTING HIVES IN SPRING.

[5873.] I have been much interested in Mr. Bocock's remarks on page 156 with regard to queenlessness, as I have had an unfortunate experience myself. Last autumn I had a splendid lot of bees, and kept them safely through the winter, in anticipation of good results the coming summer. On a particularly warm day, some four or five weeks back, the bees were all flying in the air just as if they had been swarming. I did not take much notice of them until four days later, when I proceeded to make a spring examination, and was greatly astonished to find only a mere handful of bees inside, and these afterwards left.

I had noticed bees flying to and from the adjoining hive in an uncertain manner, going first to one hive and then to another, which makes me think they must have joined on to the stock they had been fraternising with.

There was plenty of honey in the combs of the now empty hive, so that it was not from scarcity of food.

I am only a novice, but my theory is this: That, finding themselves queenless, as in Mr. Bocock's case (because I found no brood or eggs), they deserted their home and found quarters elsewhere. Whether in the next hive or not is uncertain, I suppose. Perhaps you can enlighten me.

Later.—Since writing you yesterday *re* loss of queens, I have made a hurried examination of my other hive in order to make sure that all is right therein. Owing, however, to present adverse conditions of weather, it is almost impossible to make a proper examination, and the result is not quite so satisfactory as I should have liked.

The bees seem to have dwindled, and the combs of three centre frames are so interlocked that it was very difficult to see if there was brood in them, while it was not possible to ascertain if there was a queen in the hive. The cells that I could see seemed quite empty.

Three combs at the back are full of sealed honey, but had no bees on them. I have,

therefore, uncapped some of it. In the event of my adding another frame to complete the whole ten, would it be better to place with a frame of *comb already worked out* or a *sheet of foundation*?

What bees there are seem to be fairly busy, and some are carrying in pollen; but is this *necessarily* a sign of the queen being safe and laying? They are taking about a pint of syrup per week.

Having lost one stock, I am naturally anxious for the welfare of the other. I wanted to see all the frames teeming with bees. If you can suggest anything I shall be greatly obliged.—APIS, Birmingham.

[It is by no means uncommon for the bees of strong, healthy colonies—after having lost their queens in early spring—to join on to other stocks. It would thus appear that when unable to re-queen themselves the bees offer little or no resistance to robbers, but allow their stores to be carried off, and eventually join forces with the marauders. We are disposed to think that this will be the explanation in your case.—EDS.]

WINTERING QUEENS IN BOXES.

HALF A PINT OF BEES TO EACH BOX.

[5874.] For years past our northern queen-breeders have been hunting for a plan to winter extra queens in an economical way in order that they might enter the market and compete with the southern breeders in the early-queen trade. It is in spring that the demand for queens is heavy, and owing to the northerners' inability to furnish queens before the month of June, prices naturally range high, and many a queenless colony has suffered because of the inadequate supply of queens in early spring.

If the honey producer could winter a number of extra queens to supply winter losses at just the right time, many a good colony might be saved which would mean at the close of the season so much more honey for market.

I have successfully wintered queens in "Swarthmore" mating-boxes with less than a pint of bees to each queen, and have I believe solved the problem of early queen traffic for the northern breeder.

It is surprising how well these little clusters of bees withstand the cold of our severe northern latitude — the rate of death seems much less in proportion to the full strong colony—but being in compact cluster directly on full combs of select honey, I suppose, they have every chance. Where the full colony may become separated these little clusters are closely confined in a given space.

I have not found it necessary to even winter them in a cellar. I, of course, provide shelter from wind and storm, either by placing the boxes inside a Standard hive body with a tight roof (four to a hive) and a flight-hole on each side, or inside a shed or small house with flight-holes cut through the boarding.

In making up these wintering-boxes, I take two or three cupfuls of young bees as explained in my book "Baby Nuclei," just before winter actually arrives, and give each box two fat combs of good honey—do this on a warm day to give the bees a chance to settle as they like upon the combs. Do not disturb them again until spring, when they should be examined and supplied with more honey if needed, by changing the comb containing the least brood, for one of honey.

To prevent any possibility of the queens wandering away from the cluster, place a piece of queen-excluding metal over the flight-hole on the inside. A three-quarter inch flight-hole is none too large for wintering queens in Swarthmore mating boxes. —"SWARTHMORE" (E. L. Pratt), Swarthmore, Pa., U.S.A., March 15.

FOUL BROOD.

WHY HAS IT NOT EXTINGUISHED THE BEE RACE?

[5875.] Some considerable time since I raised the question in your pages as to what explanation could be given of the fact that although it is known that foul brood is an old disease, the race of bees has been enabled to resist its ravages. None of your correspondents attempted to discuss this most interesting problem. I therefore again call attention to it with the view of eliciting the opinion of those able to give an opinion. Having been very busy removing myself and my apiary from Truro to Redruth, I have had little time for writing any bee-notes lately.—W. J. FARMER, Redruth.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

April, 1905.

Rainfall, 1·83 in.
Heaviest fall, ·39 on 10th.
Rain fell on 19 days.
Above average, ·14 in.
Sunshine, 100 hours.
Brightest day, 15th, 12·20 hours.
Sunless days, 4.
Below average, 90·2 hours.
Maximum temperature, 59° on 13th.
Minimum temperature, 30° on 7th.
Minimum on grass, 23° on 7th.
Frosty nights, 4.
Mean maximum, 51·6.
Mean minimum, 40·1.
Mean temperature, 45·8.
Below average, ·4.
Maximum barometer, 30·30 on 1st.
Minimum barometer, 29·32 on 11th.

L. B. BIRKETT.

APRIL RAINFALL.

Brilley, Herefordshire.

Height above sea, 590 ft.
Rainfall, 2.79.
Greatest fall in 24 hours, .52, on 30th.
Rain fell on 23 days. W. HEAD.

Queries and Replies.

[3723.] *Bee-keeping in California.* —Having been a subscriber to the B.B.J. for the last twelve years, I venture to ask for a little information or that you will put me in the way of acquiring the same? I am thinking of leaving England and settling in California shortly, and I notice that our senior Editor, Mr. Cowan, has not only visited California several times, but has a residence there. I therefore trust you may be able to help me on the following points:—1. I understand there is a bee-paper published in California; can you tell me how I may become a subscriber, or could you procure me some of the back numbers for reference? 2. I am also anxious to get some idea of the best situations for establishing an apiary, and other important points, such as the wholesale price of honey, price of bees, average yield, prevalence (or otherwise) of disease, and the most important honey-yielding plants. 3. Can you give me the address of any of the largest apiaries there? Anything you can tell me on the subject will be most gratefully received.—A. D., Buxton, April 18.

REPLY.—1. Full and comprehensive articles on bee-keeping in California have appeared in our pages from time to time. We can send, for 4d. in stamps, copies of B.B.J. for November 12 and December 10, 1903, and December 15 last year, which will no doubt fully serve your purpose. 2. One bee paper we know of is the *Californian Cultivator*, published at 110, West Second Street, Los Angelos, Cal.

[3724.] *Re-queening Stocks.*—Will you please answer the following questions? 1. On looking through four of my hives three weeks ago I found nice patches of brood in all the back combs of each colony, but on having another peep last week to see how things were progressing I found very little brood. The bees are, I think, all fairly strong, and had ample stores; they were also well packed up for warmth, and I am, therefore, at a loss to account for the stoppage of brood-rearing. The youngest queen is in her third year this season, and I think of getting some new queens to replace all the old ones, and so ask: When is the most suitable time to introduce them? 2. Is the enclosed comb full of old pollen or a mixture of old and new; and is it advisable to leave combs in a hive which had many similar to enclosed piece? 3. I have been a reader of B.B.J. for the last eighteen months, and consider it to be indispensable for anybody with only a slight experience among bees; but I do not quite understand why inquirers send names and addresses when writing you, and yet use initials or a *nom-de-plume*, Is there any reason for this? If so, I would like to be initiated. Thanking you in anticipation—H. G., April 20.

REPLY.—1. The sooner the hives are requeened the better, seeing that the advantages to be gained by having more prolific mothers at the head of each colony should not be delayed longer than necessary. 2. The pollen in comb is a mixture of old and new, and being hard it is useless as bee-food, besides occupying cells for no purpose. You should replace all such combs with new ones built from full sheets of foundation. 3. We always require names and addresses of correspondents to ensure their bona fides, but seldom print more than initials when a *nom-de-plume* is not used.

[3725.] *Spraying Bee-forage by Farmers.* —Can you tell me if the liquid that the farmers use for spraying charlock (I think it is "sulphate of copper") has any injurious effect on bees that visit the blooms, as a bee-keeper near here has lost some stocks, and puts it down to above? Last season my bees visited sprayed charlock within a quarter-mile, and I saw no ill-effects. I have not been in the bee-keeper's apiary mentioned above lately; but I should say "starvation" was nearer the mark.—OLD SARUM, Salisbury, April 29.

REPLY.—There is no doubt that some of the liquids used by farmers for spraying purposes are poisonous to bees, but we are unable to speak definitely with regard to the one you name. Perhaps some reader experienced in the matter will kindly help our correspondent?

[3726.] *Queen Cast Out in April—Duplicate Eggs in Comb.*—Enclosed is a queen found at the month of one of my strongest hives. It was quite dead. 1. Please say the probable cause of death. The stock is a first swarm of last year, and gave a good yield of honey. I also send two portions of comb taken from a frame-hive. 2. Will you please tell me if the bees were suffering from foul brood? The top piece shows a number of eggs in one cell. 3. Please explain cause of this, as I found queen in the hive. The bottom piece of comb seems of old-standing. The hive had not been touched since last autumn, and was well

protected from cold. I send name, etc., and sign—CORNWALL.

REPLY.—1. Dead queen sent is apparently fertile, and a fully-grown adult without any visible sign of being worn out and old. 2. The stock from which sample of comb was taken is badly affected with foul brood. 3. When several eggs are seen in single cells it sometimes arises from over-prolificness in queen at a time when there are not bees enough in the hive to cover the eggs, which, from the cause named, she cannot retain. This may be so in your case.

DISASTROUS FIRE

AT MR. E. H. TAYLOR'S HIVE WORKS, WELWYN.

Much sympathy will no doubt be felt for Mr. E. H. Taylor, who has for the second time had his well-known bee-hive works adjoining the station at Welwyn burnt down. The fire broke out a few minutes after the workmen had left on the evening of Wednesday, the 26th ult., and was first noticed by the driver of a passing train, who drew attention by blowing his whistle. The contents of the place were almost wholly bee-hives and woodwork generally, and within ten minutes of the alarm being given all was in flames. The entire contents of the office were destroyed except the safe containing the ledgers, but four cottages, occupied by a few of the forty workmen employed, though in great danger, were eventually saved. The entire damage is estimated at over £7,000, and is only partly covered by insurance.

Mr. Taylor, though naturally much upset by his misfortune, is making every effort to meet the trouble, and no time will be lost in getting orders on hand sent off. We gladly insert his request that customers not receiving goods ordered previous to the fire will please write at once giving a duplicate order, and mentioning date when sent, when the matter will receive immediate attention.

TRADE CATALOGUES RECEIVED.

JAS. LEE AND SON (Chief Office and Motor Power Works: Martineau Road, Highbury, London, N. Show-room: 10, Silver-street, High Holborn, W.C.). The above firm send out a capital catalogue for 1905, complete in every detail, and containing their latest useful novelties in bee-goods. As will be seen from their advertisement (on page ii. of this issue), Messrs. Lee and Son have acquired the machines for manufacturing the well-known British weed foundation, together with the sole right of producing that make of foundation in this country. They have also secured the goodwill of the business at Holme, Peterborough, and we have no doubt they will be able to maintain its reputation for high-class goods and fair dealing so long and justly enjoyed by John H. Howard.

S. J. BALDWIN, The Apiary, Bromley, Kent.—This 48-page catalogue is headed "The Bee-keepers' Instructor," but, as the title page tells us, is a complete "Catalogue of Appliances for 1905 manufactured by S. J. Baldwin." The address, "To my Patrons," on page 1 is signed by Mr. Baldwin, but as our readers know from the obituary notice in April RECORD, he did not live to see his catalogue for 1905 issued. The business was, however, willed to Mrs. Seadon, and is carried on as before under the management of her son, E. R. Seadon, who for some years past has taken the main share of the work under Mr. Baldwin's supervision. There will thus be no interruption in the trade, and we cannot doubt that old and new customers will avail themselves of the contents of the list before us to the full.

EDWARD J. BURTT, 24, Stroud-road, Gloucester.—Mr. Burtt again issues a neat little list, and relies, as usual, on his specialities of cutting timber for the use of bee-keepers who make up their hives at home from materials sent out in the flat ready for making up. Having again increased his machinery for woodworking, he has added illustrated particulars of several capital novelties for household use.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover square, W. **Entries close May 15, or at extra fees up to May 29.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 13.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec. Kingsthorpe, Northampton. **Entries close July 15.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural

Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Mead. Three open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

Notices to Correspondents & Inquirers.

A. W. (Cronch End).—Foul Brood Samples by Post.—We cannot comply with request for sample of comb affected with foul brood by post. On the other hand, you can see a sample at this office, if we are notified beforehand of your call, because all "specimens" are burnt out of sight without delay after inspection.

H. D. (Tarleton, Preston).—Reporting Lectures.—We regret to say our limited space makes it impossible to publish reports of lectures given by experts on bees and bee-keeping, except in very rare instances where something special is brought forward.

A. L. S. (Birmingham).—American Bee-goods.—The A. I. Root Co., Medina, Ohio; G. B. Lewis and Co., Watertown, Wis.; and the W. T. Falconer Manufacturing Co., Jamestown, N.Y., are among the leading manufacturers of bee-goods in America.

A. R. K. (Mincing Lane, E.C.).—Adulteration, Reliquefying, Packing, etc., of Honey.—There is no special book on the above, to our knowledge; but all the subjects mentioned have been dealt with in our pages from time to time. It would, however, be no light task to search our indexes for years past in order to find them. Perhaps some readers (with leisure) might help in this.

POLLEN (Willesden, N.W.).—Old Pollen in Combs.—The hard pellets sent are—as you suppose—old pollen which the bees have, with an infinite amount of labour, pulled out of the cells and cast out. It will help the "strong stock" from which you hope to get a good harvest if you will remove any combs with cells mainly filled with such useless matter, and give a frame of foundation instead in centre of brood-nest.

F. O. F. (Birmingham).—Tested Queens.—A tested queen is one which is known to have been mated safely, and whose progeny has been examined after hatching out in order to judge of its purity or otherwise.

Suspected Combs.

WEST KENT (Tunbridge Wells).—Comb sent shows no trace whatever in the cells; it is, therefore, impossible for us to tell if there was foul brood in the hive before bees deserted it.

BALSAM (Heathfield, Sussex).—There are slight signs of foul brood in one or two cells; but as the combs are nearly full of hard old pollen, they are useless. We should, therefore, burn them and refit the hive with foundation—after cleaning it well—before using again.

Honey Sample.

C. C. (Cheltenham).—Honey is from mixed sources (including "honey dew"). It is also rank and coarse in flavour, the latter reminding us of that from trifolium or crimson clover. It is of poor quality.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

WANTED, for scientific purposes, DEAD QUEEN BEES and WORKER HORNETS. Will brother beekeepers kindly oblige?—HERROD, Apiary, Luton.

WANTED, about 3 cwt. BEST CLOVER or SAINFOIN (English) HONEY.—Please send sample and price to F. W. L. SLADEN, Ripple Court Apiary, Dover.

FOR SALE, THREE good Colonies BEES, Standard Frame Hives. Also Spare Hive, Extractor, Feeders, all appliances, two books; £3 10s. Buyer pay carriage.—Quarry Bank, Malton, Yorks. H 16

QUEENS! QUEENS!! QUEENS!!! Doolittle's Strain, like "Charley's Aunt," still running strong. Virgins, 1s. 6d., from end May. Fertiles, 5s., early June. Safe delivery guaranteed. Book now and pay later. Send penny stamp for Taylor's pamphlet and price list.—DAVID TAYLOR, Ilminster. H 15

STRONG SWARMS, 10s. each. Boxes free. Safe delivery.—H. BROUGHTON, Barrow, Hull. H 14

FOR SALE, THREE Strong, Healthy STOCKS of BEES, two on frames, in makeshift hives, one in skep, 30s. the lot.—ALFRED GREEN, Tangley, Andover. H 13

MAY SWARMS, 12s. 6d. June, 10s. 6d., in makeshift hives, on wired weed foundation, 18s Healthy and vigorous; 50 stocks kept. Inspection invited on Saturdays. Deposit.—P. HANSEN, Gardener and Bee Expert, 3, Gladstone Cottage, Norwood Green, Southall. H 12

WANTED, TWO STOCKS of ITALIANS or HYBRID BEES, on Standard Frames, in exchange for a Memo. Frena Hand Camera and Magnifiers; as new.—GEORGE PACKER, Aldergrove House, Porth, near Pontypridd. H 11

15 STOCKS BEES, in "W.B.C." and Single-walled Hives. Strong and healthy. ROBERT GRAY, Bromboropool, Cheshire. H 10

FOR SALE, Strong STOCKS of BEES, on eight frames, 1904 Queens. Guaranteed healthy. Free on rail; £1 each.—JOS. ROWLAND, The Cliff, Holbrooke, Derby. H 9

6 STOCKS BEES, on eight Standard Combs, 1904 Queen, guaranteed healthy, 20s. each. Travelling box returnable.—J. J. HARDING, Trimdon, Trimdon Grange, Durham. H 8

FOR SALE, owing to removal, BEES; six frames, 15s. 6d.; eight frames, £1; ten frames, £1 5s. Guaranteed healthy. Packed and put on rail free. Black Minorca Eggs for sitting, 2s. 6d. dozen. White Orpington Eggs, 3s. 6d. dozen. Unfertiles replaced.—EDEN, Chadlington, Oxon. H 7

Editorial, Notices, &c.

THE "ROYAL" SHOW NEXT MONTH.

DATE FOR CLOSING ENTRIES.

The date for closing entries at ordinary fees (Monday next, the 15th inst.) being now near at hand, we venture to again remind readers of the conditions mentioned in our issue of a fortnight ago. Under the conditions then named we thought that a goodly number of bee-keepers might be induced to appear as exhibitors at Park Royal, and, as bees are in many parts of the country doing very well indeed, there is plenty of time in the six weeks or more before us for strong colonies to store honey enough—and to spare—for the show-bench. The weather is, at present, most favourable for bees, and we hope that all whose stocks are in good condition for early work will send at once for an entry form, bearing in mind the fact that should there be a change for the worse in the weather—such as will prevent the completion of intended exhibits—the usual return of entry fees will be again made. Nor must it be forgotten that entries, at extra fees, may be made up to May 29.

The outlook at present is very good, and if bee-keepers will make up their minds quickly to try and appear as exhibitors the show may be equally good.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of April, 1905, was £3,815.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Foul Brood Plague.—We find in *Gleanings* C. E. Woodward writing from Cuba that he has had much experience with the disease in the tropics. Although he has never found out that the introduction of new queens effects a cure, it is a fact that the yellow beauties, or, as some call them, five-banders, are very much more subject to all diseases than are the blacks or three-banded Italians. Three years ago, when his home apiary of 400 colonies was attacked, in every case it was sure to be one of his very yellow stocks. There is a cause for this, as all who have had experience with this yellow strain of bees know very well that their propensity is to rob; hence the rapid increase of the disease. Although he likes those yellow beauties, he has had to dispose of them for this fault. He also mentions an instance of a priest who had kept bees long before the war, and who sent to a queen-breeder in the United States and bought some Italians, and after a while they all got sick and died. He is sure foul brood killed the bees, as the natives at that time did not understand the treatment of the disease.

Food Definitions and Standards. — Mr. G. W. York tells us in the *American Bee Journal* that a circular has recently been sent out by the Bureau of Chemistry of the United States Department of Agriculture containing schedules prepared by the Committee on Food Standards, Association of Official Agricultural Chemists. They referred to "sugars and related substances," and honey was included, the following definitions and standard being suggested:

1. *Honey* is the nectar of flowers and saccharine exudation of plants gathered and stored in the comb by bees.
2. *Comb-honey* is honey still in the comb.
3. *Extracted honey* is honey which has been separated from the comb.

Standard honey is honey which is lævo-rotatory to polarised light, contains not more than twenty-five (25) per cent. of water, not more than fifteen one-hundredths (0.15) per cent. of ash, nor more than eight (8) per cent. of sucrose.

Moving Bees Short Distances. — Mr. C. F. Bender describes in *Gleanings* how he has moved five whole apiaries for himself and friends during the last seven years, the distance in each case being less than a mile. He thinks March is the best time to move hives, but if it has to be done in warm weather, the hive entrances should be left open while on the road, and if this is not too rough it is perfectly safe. Not more than one dozen colonies should be taken at one time, and a man with a lighted smoker should walk alongside and watch them, while another does the driving of the waggon. If the temperature is below 40 deg., it would be safe to shut the bees in. Nothing should be left on the old spot, as some of the bees are sure to come and look round, but if they have marked the new home properly they are sure to return. If they have to be moved in warm weather, it should be done very late in the afternoon, so that they will not have a chance to fly until next morning. Put them on the new stands and leave them alone until some of them begin to fly, then go round and give every one a good smoking, so that they will know there is something doing. Then set up a board in front of each entrance so that a bee cannot easily get out without bumping her head. He thinks this is the most important part of the whole work, but it is such a small thing that it is often neglected. It causes them to notice that there has been a change, and to mark the spot before leav-

ing it. Many will visit the old spot, and if they find a hive there, will remain and forget the new place; but if there is nothing, they will return to the new locality.

Bees in Madagascar.—In addition to the Madagascar honey-bee (*Apis unicolor*), M. Boutillot describes in *L'Apiculteur*, a sort of honey-fly, which is found in the province of Tuléar, which the natives call "Sihy." The insect is almost an exact reproduction of a common fly, but one quarter the size. The head, body, and form of abdomen, thorax and wings, are all exactly similar to, and the same colour as, those of a fly. It has no sting, but the proboscis is similar to that of the common fly. The Sihys choose for their dwellings dried branches that have fallen from trees, and more especially branches detached from the trunks of a cactus (*opuntia*), called by the natives "Ivungo." The honey has a great drawback, when it is brought by the natives, in that it is very dirty and contains pieces of bark as well as dead flies. The flavour, however, is fine, with a delicate aroma resembling that of tamarinds, and the amount of saccharine matter appears to be greater than in ordinary honey.

Drones from Virgin Queens.—We read in *Schweizerische Bienenzeitung* that in order to ascertain if drones proceeding from eggs laid by a virgin queen are of the same value as those of a fecundated one, Dr. Brünich, on February 14 last, removed a queen from a colony that had already got some fine combs of brood. On the 27th, a young queen emerged from a cell, which was shown by larvæ of queens being cast out of the hive. Perforated zinc was placed at the entrance to prevent the queen from leaving the hive. Four frames containing drone-comb were suspended in he centre of brood-nest, but, notwithstanding copious feeding daily, egg-laying did not commence until April 20; and during these five weeks the virgin queen made desperate efforts to get out. On May 15, Dr. Brünich made three nuclei furnished with this drone-brood, and gave them workers which were obliged to pass through queen-excluder zinc to prevent other drones from entering; in addition he introduced a queen-cell raised for this purpose. On May 17 the young queens were hatched, and already there were a number of young drones walking about on the combs. The nuclei were then removed to a remote valley in which no bees at all were kept. The new location chosen was such a distance away from any other hives that it was impossible for the young queens to meet any but the drones from their own nuclei. One queen was lost, and the nucleus perished. The two other queens became fecundated and laid eggs, which produced workers in abundance. These queens were introduced into strong colonies and turned out to be as good as any. This experiment is satisfactory as showing that drones from virgin queens are as good as any others for the purpose they are intended—and as also proving the "Dickel theory" untenable.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

SOME USEFUL HINTS.

[5876.] *Introducing Queens.* — In spring and early summer, when uniting weak lings, precautions are scarcely necessary. Endeavour to get the bees of both lots on three frames. Kill one queen, preserving the best. In the evening of a fairly cold, or, rather cool, day, open both the hives, then gently and promptly lift the three frames as one, and deposit them in the other hive without jarring. The whole undertaking is almost momentary and the bees are scarcely aware of any disturbance. Next morning they are discovered working as one family, the queen heading the combined lot as if she were the mother of the whole united community. It is important to know this, as it saves a good deal of fussing when uniting these small lots of bees.

Foul Brood Leaflet.—I think it should be as widely known as possible that an excellent little leaflet of four pages is issued *free* by the Board of Agriculture. It contains a precise and concise description of the appearance of a comb affected, a very good illustration from a photograph of such a comb, the symptoms of the disease, the sources of infection, and the prevention and remedies for curing the disease. The last two paragraphs are worthy of special study. Copies of the leaflet may be obtained free of charge and post free on application to the "Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London,

S.W." Letters of application so addressed need not be stamped. All bee-keepers should obtain a copy, or, if needed for distribution, a dozen copies will be sent.

Separators.—A large producer of honey in sections informs me that, as a result of his tests with fences, uprights, wire-work, "Sheppard" dividers, queen-excluders, riddle-holed tin, common tin separators plain, and the latter with three-bee-ways, cut out almost right across, he sees no advantage in finish or amount of work in the more elaborate ones. He has determined to revert entirely to the *plain* tin divider with two-bee-way sections. I had an idea some years ago that the more chances of communication we gave the bees the better and more perfect work they would do, but from what I have seen and heard I have now doubts. Strong colonies will fill the one as quickly as the other, and turn out as fine sections.

"*The Baby Soul of Singing.*"—I think the description is very apt. The scene is one of the fairest demesnes in all Scotland. The spectator and singer is a "belted earl," an octogenarian, poet, and one of our most learned writers on arboriculture. The scene is an avenue of glorious old linden trees, all a hum with multitudes of bees, wild and tame, on a bright and sunny summer day in late July when millions of tiny buds and blossoms were willingly offering up their tribute of sweet nectarious juice to the innumerable tongues so eager to sip it up and consign it to their cells. Their eager quest is accompanied by this melodious hum, this rapturous melody. So our singer breaks forth:—

> The bees about the linden tree,
> Where blithely summer blooms were springing,
> Would hum a heartsome melody,
> The simple baby soul of singing.

Andrenæ.—This wild bee burrows holes in the ground in which to make its home. Ten to one if you look along your garden walks, about this season of the year, you will find a number of miniature hills raised here and there with a hole close by from which the debris has been excavated. In a few hours, if you carefully watch the process going on, you will see the bee throw out sand or earth many times the weight of its own body. The hole about admits a lead pencil, and, by using a little pressure, it may go down about half its length. Carefully remove the earth at the sides, and you will find the bee and its nest. The Andrenæ look very much like our hive-bee in general appearance, but are rather smaller. They are very active, and ply their task with great industry, returning from their flights with their hind legs and sometimes their whole bodies covered with pollen collected from the flowers. Its joys and sorrows seem to be self-centred, for it leads a life of solitary isolation. It is not like the hive-bee, a creature of the crowd, and, until its young are produced, no mate nor comrades share its labours or its home. It seems, however, to live like the hive bee on honey and pollen, but having no true carbiculæ its loads of the latter are carried home on the feathery hairs found all over its body. The young seem to be self-sufficient from the moment they issue from the egg, requiring no nursing. From the first, they manage to subsist on the honey and pollen-paste in which the egg is deposited by the parent bee, in the rudimentary, rough, thimbleshaped cell in which it has been cradled.

Two Honey Recipes.—(*a*) "A Cough Cure: 4 oz. of honey, 2 oz. of glycerine, 1 oz. of vinegar, 1 oz. of brown sugar, the juice of two lemons. A dessertspoonful occasionally." This cough mixture is said to have been used by the late Sir J. Paget, surgeon to Her late Majesty. (*b*) "For Chapped Hands: Honey and glycerine in equal quantities. After washing the hands, and while still wet, to be rubbed in and then dried off on the towel." The correspondent who kindly sends me the foregoing, forwarded a plant of rosemary from a cutting obtained in the Garden of Gethsemane, "as a small return for the pleasure I have in reading your articles in the JOURNAL." The thank-offering is very highly appreciated, and will be preserved as a much-valued souvenir.—D. M. M., Banff.

FOUL BROOD.

WHY HAS IT NOT EXTINGUISHED BEES?

[5877.] This question, asked by Mr. Farmer (5875, p. 177), escaped my notice when raised by him in a previous letter. My opinion is that the bee-race has not been extinguished because the disease has either spread from one apiary to another until it reached a district some miles wide where there were no bees, either in hives or living wild in trees or buildings, and no other means of aiding the spread of disease, such as the sale and purchase of infected bees or appliances. Thus the work of devastation has been stayed in that direction. Or, what is equally likely, in its spread from apiary to apiary among those owned by bee-keepers who were unable to recognise foul brood, and so took no measures to avoid its spreading, until the disease has come upon an intelligent bee-keeper, who knowing what an evil it is, had dealt with the disease in his district in a way that stopped its progress in that direction. And, in my opinion, there is something more than theory in this, for it is what I have myself seen happen in more than one locality. In two districts I have been watching the spread of this scourge for ten and six years respectively, and noting the ability or otherwise of the

bee-keepers most directly concerned to effectively deal with the disease, either with or without assistance. Unfortunately the majority of those who keep bees are not sufficiently concerned about the welfare of their bees to cause them to deal with the disease, when detected, in the thorough manner by which only success is assured in ridding us of our greatest enemy.—WM. LOVEDAY, Hatfield Heath, Harlow.

AN EARLY SWARM.

[5878.] I thought it might be of interest to B.B.J. readers to know that a strong swarm left a neighbour's hive to-day (May 7) at two o'clock. The hive from whence the swarm issued had been fed with syrup all through the winter. This is a fairly early swarm, is it not?—J. E. B., Purley, Surrey.

[The first we have had notice of.—EDS.]

THE ERADICATION OF FOUL BROOD.

WANTED, A NATIONAL EXPERIMENTAL APIARY.

[5879.] A famous American experimenter in the plant world, whose name I cannot at the moment recall, has succeeded almost magically in breeding varieties of fruit and flowers to fulfil almost any desired result. He has bred a spineless cactus, a seedless apple, and even an entirely new plant has been produced. These results have been attained by continual special selection and judicious crossing. There appears to be no limit to the possibilities of Nature in this direction. The same principle of variation prevails in the animal world, and Nature generously responds to the labours of the intelligent, painstaking, investigating experimenter. Now, cannot we make a special effort to use this mysterious natural power in producing a superior race of bees? Private breeders claim to have already effected an improvement, but practically the results are not very marked. They who are obliged to keep an apiary for commercial purposes, while they may accomplish a great deal, cannot devote that time and money to the thorough experiments necessary. The most urgent need is for a race of bees capable of resisting foul brood. I think, we need not consider this impossible of realisation. In affected apiaries, it is found that some colonies entirely escape infection, and even in the same hive one cell may be rotten with disease and the next healthy and clean. Now, this all points to the fact that there is such a thing as natural immunity, and we find this is true of all plants and animals; some cannot be given a disease. Amongst human beings some are found naturally immune from small-pox, or, at any rate, so long as they observe the rules of health, while others are less immune. I have not the least doubt that we could breed a race of men immune from consumption if it were possible to control marriages and to apply the principles observed in the breeding of animals. This, however, is never likely to be attempted. Nothing appears to be impossible in this direction in the way of directing the powers of Nature into any desired channel. Our twentieth century, with all its progress, is merely in the stage of childhood as compared with the knowledge and power that mankind will possess in, say, the fortieth century, if there be no interruption to the law of progress which has prevailed since the foundations of the world were first laid. Wireless telegraphy, and similar marvels, are, I believe, as nothing to those yet to be revealed. The powers of Nature are mysterious, and past understanding; no one ever can explain them. We know that there is a powerful infinite force at work, present with us, and responding to our efforts, and our bees are part of it; and that which produced all things is capable of perfecting all things, if its laws are ascertained and obeyed. Now, can we not avail ourselves of this mighty influence to produce a healthy race of bees? A great deal of effort is being spent on the Foul Brood Bill, but until we thoroughly understand the root causes of foul brood, such legislation will not be quite effective. We know that the disease represents a germ thriving in a bee-hive, but why does the germ thrive? What enables the vitality of the germ to overcome the vitality of the bee? It seems to me to be a strife between two vitalities in which the strongest wins. These important questions can only be settled by strictly scientific experiments. The ordinary man is not capable of studying germs; it requires a special training. The investigator requires to be both a germ expert and a bee expert, and to have ample funds at his disposal. Now, I think, that we should endeavour to prevail upon our Government to set up one or two experimental apiaries, the primary object being to produce a race of bees immune from foul brood. Continual selection should be made from those stocks found best able to resist disease and these should be bred from. If the foul-brood germ be really indestructible, it follows that no amount of disinfecting will keep the disease down, and that foul-brood legislation will only be partially useful. We must have a radical remedy; why not an immune race of bees? An apiary for experimental purposes might be composed of forty stocks, selected from different apiaries and different races, and all should, if possible, be obtained from

(*Continued on page* 186.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Our friend, Mr. Rhys, seen in his apiary on this page, is evidently no stickler for uniformity either in hive shapes or regularity in arrangement; he has, however, had the good fortune to make a success of bee-keeping, as the following notes show:—

"I send a few 'notes' of my bee experiences, with photo of a portion of my wooded bee-garden, though I fear they will not possess much interest for your readers. First let me say I knew next to nothing about bees until the year 1886, when a homeless swarm came to me for shelter. A neighbour, supposed to understand bees, lent me a cheese-box carefully covered inside with a sticky mixture of barm, treacle, etc., to put the bees in. This box was placed close to the swarm, but they heeded it not, preferring to cluster in the open all night. Next morning a boy came along (who had seen bees handled) and he bravely ladled them into the box with his hands. Some of the bees remained there securely stuck fast to the side of box, but the majority buzzed about and my willing helper got badly stung. When next I saw the poor lad's face, his mother had painted it blue, and he was unrecognisable. It was a lively time on the whole, but in three days the bees were somehow got into another box and remained there quietly enough. Then a farmer's wife came and claimed the swarm as hers, and she carried them off, too, box and all!

"Sorry enough at my loss and without being able to help it, I bought a stock of bees and made a start. Just then I discovered your valuable JOURNAL, which I have taken in regularly ever since. I also got the handbook for cottagers, 'Modern Bee-keeping,' and, having read it, I next began driving condemned bees. Success followed, profits increased, and in 1894 I had a ton of honey to sell, and made a gain of £50 from twenty-two hives. Then, the question arose in my mind, if twenty-two hives earn £50, how many are required to earn £150? The answer was, I thought, simply "get more hives, and bees." Alas! how rudely were my visions shattered. A gentleman presented me with a few old hives, and in them, I believe, came foul brood, which caused a terrible havoc among my bees, and paralysed my flourishing little industry. I now sweep it out annually, burning whole lots of bees and hives, but it usually turns up again in the spring. How one wishes for an effective Bill for dealing with foul brood, and how difficult to understand the position of those who oppose legislation. To the west, and for ten miles south of me, many hives are rotten with disease; and yet, for six miles into Herefordshire on the north, what hives I have seen are quite healthy.

"I ride long distances for driven bees, bringing home as many as ten lots at a time on a simple carrier fixed to my 'bike.'

MR. H. RHYS'S APIARY, REDBROOK, MONMOUTHSHIRE.

I get the road nearly all to myself on these expeditions, and I enjoy them immensely. These driven bees, as a rule, do very well.

"I make all my own hives, which, as seen, are of many shapes, some being double stocks, like those of Mr. Wells. Perforated dummies are not wanted here in the double hives. I only see that both lots are strong, choose a fine day for supering, with honey coming in well; remove quilts, give a little smoke, and place on queen-excluder; then on the latter put a super of about twenty standard frames. This done, re-arrange all coverings, and use a lift to raise roof, and all is finished in about five minutes. I followed this plan with perfect success for some time before hearing of the 'Wells' system, and not a bee lost through fighting. I once got 300 lbs. of surplus from a double stock made from a bacon-box, but I shall make no more double hives. Last year was the most disappointing season I ever had. Bees being strong and healthy, twenty-five to thirty cwt. of surplus honey was looked for, but my harvest was only three cwt.

"At present I have forty-five stocks, all vigorous, strong, and well prepared for a good time. I have taken bee-keeping as a subject in school, following the former scheme issued by the Board of Education; the lessons and bee-manipulations always seeming to interest the boys. A carpenter's bench was put up at the school, and the boys began hive-making, but the fear of stings prevented them making a start as bee-keepers on their own account.

"I conclude by wishing you and all bee-keepers a prosperous season in 1905."

("*The Eradication of Foul Brood*," *continued from page* 184.)

apiaries or districts where foul brood is unknown. Amongst these should be placed an infected stock, and it should be carefully noted which of the other stocks escaped infection, and these should be removed elsewhere and bred from. It would take many years to work out the desired result, but I am sure it could be attained. It needs money and time.—W. J. F., Redruth, May 6.

[We insert the above mainly with the object of showing how the lofty ideals of some, no doubt well-meaning, bee-keepers may lead them into flights far beyond the possibility of realisation. What chance, we ask, is there of seeing "a national experimental apiary" established in this country for the purpose advocated by our correspondent? Those of us who have laboured hard in the effort to obtain Government help for the bee-industry in other directions during the past few years, know too well that we must make a great deal of headway beyond where we now stand before experimental apiaries maintained by the public funds will come within the range of practical politics. Bearing all this in mind, it may be safely said that the only useful work in the line suggested by our correspondent must be undertaken by queen-breeders who take up the question as a business one, and to these we wish every success in breeding bees so vigorous and hardy as to be able, in a great measure, to resist the germs of *Bacillus alvei*.—EDS.]

QUEEN FLIGHTS IN SPRING.

[5880.] Referring to the letter of "Wilts" in B. B. JOURNAL of April 27 (5868, page 167), may I be allowed to say the theory of queens leaving the hive for an airing-flight in spring is not by any means new? My experience is that I lose some queens every spring in the same way. This will be seen by referring back to my letters in B. B. J. of November 28, 1901 (page 473) and in B. B. J. of April 24, 1902 (page 163). —JNO. BERRY, Llanrwst, N. Wales, May 6.

Queries and Replies.

[3727.] *Protecting Hives from Strong Winds.*—My hive-stands are fairly well protected from our strong winds, except on the east, which the hives face. I should like to plant a low hedge in the front of the hives for additional protection, to grow, say, three feet high. I therefore ask:—How far from the front of the hives must such a fence be, so as not to impede the outward and homeward flight of the bees? —MEL ROSE, Isle of Wight.

REPLY.—With a fence only three feet high, about five or six feet would be quite sufficient to allow free flight for the bees.

[3728.] *Removing Useless Combs from Hives.*—I enclose herewith sample of comb taken from a hive yesterday, one which I recently purchased, unfortunately, without first examining it inside. I should be very much obliged if you will tell me what it is, and how to deal with it. I do not see anything in the "Guide Book" that describes it. There are several combs in the hive similarly affected, but not so bad as this one. I send name, etc., and sign—FIRST SEASON, Suffolk, April 27.

REPLY.—Comb sent is very old, and—apart from being filled with hard, mouldy pollen—badly needs renewing; such combs are worse than useless in a hive. If the hive is now strong in bees, you might begin renewing combs at once by removing one of the worst (a broodless one, of course)

and inserting a frame of comb-foundation in centre of brood-nest. Then repeat the operation a week or ten days later, and so on till all bad combs are replaced by good ones.

[3729.] *Drone-breeding Queen being Superseded.*—Having noticed for some time drones flying from one of my hives, and suspecting the queen might be a drone-breeder, I examined the colony to-day, and found no worker brood in combs. The centre frames contained small patches of drone-brood and the enclosed queen-cell. I shall take it as a great favour if you will kindly inform me in your interesting publication, of which I am a constant reader, whether the cell contains a drone or a queen. Thanking you in anticipation—J. G. S., Lanarkshire.

Reply.—The sealed cell sent contains a queen in the nymph state, and, from details given, the natural conclusion is that the queen is worn out and a drone-breeder. The bees had evidently taken steps to supersede the old queen by raising a successor.

[3730.] *Honey from Diseased Stocks as Bee Food.*—I have some honey extracted from brood combs of a stock affected with foul brood. Will you please inform me in B.B.J. if this can be used for bee-food, and if so, how must I prepare it? I would not think of using it if it is not safe to do so.—Doubtful, Derbyshire.

Reply.—On no account must honey from a diseased stock be used as food for bees; but it is quite wholesome for household purposes.

[3731.] *Immature Bees Cast Out of Hives.*—Would you kindly help me by giving your advice and opinion of the enclosed? On several occasions this spring I have found on floorboard of one of my hives (a skep) small white grubs, similar to what I send you, but they have generally been perfectly white and healthy-looking. This morning, however, I found this more developed young bee with a dark appearance about it, and I fear it may possibly be foul brood. Am I right in this? I bought the skep in question last year, and it is now very strong in bees, which have been carrying in enormous quantities of pollen, and I am, therefore, looking forward to a good natural swarm from them. I have five other frame-hives ("W.B.C.") working. I send name, etc., for reference, and will be glad of your opinion and advice.—Dorset.

Reply.—The dead larva cast out had reached the chrysalid stage, and was no doubt cast out by the bees after being chilled. There is no cause for alarm in what you have seen, and the stock in skep is evidently doing well.

[3732.] *Supering the "W.B.C." Hive.*—Having procured a new "W.B.C." hive, which I hope to use this season, I notice that when the box of shallow-frames is placed over the standard frames in body-box, the bees would be able to come through into the space surrounded by the outer coverings. Is this right? 2. I see in the "Practical Note-book," page 61, in an article by Mr. Peebles, "narrow flaps" for covering these openings are spoken of. My hive has no narrow flaps. Ought I to cover these exposed ends, or may I leave them as they are?—Yarmouth.

Reply.—1. If the hive referred to is properly made, no bees can pass into the space mentioned, seeing that the shallow-frame box sits close on to sides of body-box and across the metal ends of frames in the latter, so that no bees can escape, and no such trouble arises as you fear. 2. The "narrow flaps" mentioned by Mr. Peebles are used for the special purpose mentioned, and are only required in his form of the "W.B.C." hive.

[3733.] *Selling Bees.*—Three weeks ago we sold a small stock of bees. They were taken away by the purchaser to his home in Burnley, from whom (in about six days) we got a letter saying that all the bees with the exception of about one hundred were dead, and no queen could be found. If you can aid us in determining the responsibility, you will greatly oblige. The purchaser wishes to ask the following question: On purchasing a hive of bees, on arrival we find no sealed brood. Enclosed is a piece of comb which was covered by the bees. Please say if there are evidences of a queen having been here during three weeks previous to the present date. Please reply in the Bee Journal.—J. S.

Reply.—We can only say that comb sent seems quite healthy, and there is no sign of brood in cells. It is impossible to judge how long it is since the comb contained brood.

[3734.] *Wide-ends for Shallow-frames.*—I intend using shallow-frames this season when supering, and should be glad to have your opinion on using the "extra wide" metal ends for same. Should I be able to obtain more honey from eight "wide" frames than ten frames using the ordinary ends? Thanking you for past advice, I send name and sign—Queen Bee, Harborne, May 5.

Reply.—Shallow-frames spaced with wide ends certainly tend to appreciably increase the weight of honey in a box.

[3735.] *Dead Bees Found in Combs.*—Herewith please find a piece of comb (with dead bees in cells) cut from a frame-hive, the bees of which died out during the past

winter. I suppose it to be a case of dead brood, and not foul brood, but am isolating the hives (two) until I am assured as to its being foul brood or not. A heavy proportion of stocks have died out here since last autumn, many with an abundance of stores. Having showed no signs of disease, I am at a loss to explain to neighbours the cause of death. Can it be that the queens had no breeding-room in the autumn, and that this reduced the stocks below breeding strength this spring? Thanking you for giving me most useful information on previous occasions, I send name, etc., for reference, and sign —PEDAGOGUE, Lincoln.

REPLY.—The dead bees in comb sent were saturated with wet, as if they had been drowned, and, being dead for some time past, the decaying remains of dead bees were full of the maggots usually found in decaying animal matter, which was promptly burnt without examination.

[3736.] *Dealing with Bees in "Wells" Hives.* I have to thank you again for past kindnesses in replying to my inquiries. I am much interested in many of the inquiries and replies contained in your journal from week to week, and will esteem very highly your reply—in first paper, if possible—to the following: I have two stocks in a "Wells" hive, and would like to get honey from them instead of hives and swarms this season. How often would I require to examine them and remove queen-cells? This is my first trial of the system, and would like to do it as thoroughly as possible, so as to be successful if I can.—NOVICE, Bridge of Allan, May 8.

REPLY.—Stocks in "Wells" hives are dealt with in same manner as those in single hives, except that the frames should be examined as seldom as possible because of the risk in getting the bees of both compartments before the time for supering arrives.

[3737.] *Age of Imported Queens.*—I am anxious to requeen two stocks with Italian and Carniolan queens, but as I am a novice and have never before bought queens, I shall be obliged if you will advise me on the following points: 1. Are queens imported at this time of year usually last year's queens, or, if they are usually queens which have just been reared, are they fertile, or have they still to be mated? 2. Can a queen be kept by herself for a week or so after arrival? If so, how should she be treated? I ask, because I do not feel sure of finding the present queens the first time I look for them. 3. If I fail to find the old queens, would it do to start new hives for the new queens by putting them where the old hives now stand, trusting to the flying bees going into the new hives and staying there with the new queens? I could, of course, at this time of year, give the new queens some frames of comb containing both brood and honey. I trust I am not asking questions which are dealt with in the "Guide Book"; I do not think I am. I have read the directions for introducing new queens, but they begin with the assumption that the old queens have been, or can at once be, removed. A line of reply will oblige.—T. E., Tarbut, N.B.

REPLY.—1. Imported queens should be those reared either in the year of sending out or in the previous year, as stated by sellers, but they must be fertilised before despatching. 2. Yes, if care be taken and the breeder is informed of the fact of delay before introducing queen to her new home so that he may arrange accordingly. 3. Do not try that plan; it will fail.

[3738.] *Preventing Swarming and Drone-rearing.*—I have two stocks of bees in frame-hives, and do not want them to swarm this season if I can help it. Last June I did as described in "Guide Book" (page 20), and no swarm issued; but I see on page 170 that if drones are not required the frames have only to be placed $1\frac{1}{4}$ in. from centre to centre, in order to stop drone-rearing. That seems to be such a simple method that I ask, if I do so, is there any risk about it? Should anything happen to the queen, I suppose having no drones would place the bees in a worse condition than having only to rear a new queen? Perhaps it is not worth the risk? If you will kindly advise me, I shall be much obliged. Your "Guide Book" is such a great help to me, that I am glad to say my bees seem in a very flourishing condition so far, numbers of young bees are bringing in quantities of pollen. I took advantage of the fine weather on March 16 and 23 to give the bees clean hives. I have a plan of my own for giving them candy. I put it while warm into glass finger-bowls, then cut a hole in the coverings and turn the bowl upside down. I can thus see how the bees are taking the candy without disturbing them. January 16 last was the most awful day I ever remember. The wind cut like a knife, with sleet and snow. On going out to see my bees next morning, I was terrified to find that the roofs were partly off (in spite of cord over them with a brick attached), the pillows inside were covered with snow and ice! I quite expected to find my bees all dead, but on looking in they appeared quite comfortable and happy, and have been doing well ever since. My queens are young, and I hope everything will go on right. I am

afraid of taking swarms single-handed. —E. M., St. Asaph, N. Wales.

REPLY.—1. The directions on page 170 of "Guide Book" only apply to the time when bees are building new combs in May from starters or full sheets of foundation. You cannot apply the principle to hives with combs already built.

Echoes from the Hives.

Stockport, Cheshire, April 29.—Weather considerably milder but showery, and swallows have just arrived. Stocks generally are fairly well forward; but, unfortunately, I find that last week's severe weather has caused clusters to contract, resulting in chilled brood. The humble-bees were noticed working on blossom. Although 9 degrees of frost was registered on Saturday, the 22nd ult., at Holmes Chapel, yet blossom apparently has not suffered greatly.—JAS. WADDELL.

THE FIRE AT MR. E. H. TAYLOR'S WORKS.

Mr. Taylor asks us to convey his sincere thanks to the many bee-keepers and others with him in the heavy business trials which have recently fallen to his lot. He also wishes us to say that he is now again at full work, carrying on business in temporary premises close at hand, pending the erection of new workshops, etc. Writing on May 4, he says:—"I turned out the first hive (a 'W.B.C.') yesterday, just seven days after the fire!" We have no doubt Mr. Taylor's customers will also show their sympathy by bearing in mind that there will be no delay in the despatch of goods now ordered.

Bee Shows to Come.

A nominal charge of 2s 6d. is made for notices in this column, which cover cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 14 and 15, at Southend-on-Sea.—Annual Show of the Essex Agricultural Society. Bee and Honey Section under the management of the Essex and Suffolk Beekeepers' Association. Classes open to the United Kingdom. Schedules from Mr. G. R. Alder, Rawreth, Essex. **Entries close May 31.**

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 15, or at extra fees up to May 29.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 13**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entry to members. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts.

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

F. W. H. (Devon).—Varieties of Heather. —Both sprigs of heather sent belong to the bell-heather class, one being the *Erica cinerea*, or bell heather, and the other is *E. vulgaris*. The first named is fairly good for bees, but does not nearly equal the *Calluna vulgaris*, or common heather, which is best of all for yielding good honey.

A. W. B. (Braintree). — Drone-breeding Queens. — "The elongated cells," you mention contain drone-brood in worker-cells. There is no disease in comb, and the "very weak" condition in which the stock is stated to be will account for the

brood being chilled, through lack of bees to keep it at the needful temperature for hatching out.

E. S. (Overton, Ellesmere).—Young Bees Cast Out.—The dead bees sent are immature drones, not queens as suspected. It need not cause alarm to see such cast out occasionally at this season from strong stocks, as yours are stated to be.

W. F. (Windsor).—Wax-moth in Hives.—The bee seen busy carrying a maggot out of hive and dropping it on the ground was doing useful work, the maggot being a full-grown larvæ of the wax-moth, *Galleria cereana*.

W. H. H. (Methwold).—The Unique Extractor.—We do not know the present address of maker of the above-named extractor, but have no doubt that it will be advertised in our pages, as usual every year when season for its use comes round.

F. B. C. (Mitcham, Surrey).—Dark Honey Again Feared.—There is no reason to suppose that we shall have another season of honey dew; indeed, the outlook shows no sign of such.

Cotswold (Cirencester).—Insect Nomenclature.—Insect sent is a queen wasp.

Heilent Cheil (Aberfeldy).—Building-up Stocks.—There is ample time between now and August to build up any stock—with an ordinarily good queen at its head—to full strength for your harvest. Should the bees be now short of stores, it will be necessary to feed at once in your northern district. Thanks for Press cutting sent.

W. D. H. (Chesterfield). — Transferring Bees from Skeps to Frame-hives.—Your best plan will be to let the bees transfer themselves to frame-hive according to the full directions given on page 140 of "Guide Book." The proper season for operating is now with us, so there need now be no delay as the skep is strong in bees.

G. R. A. (Rawreth).—Membership of B. K. Association.—A person who, for trade purposes, represents himself as a member of a county association of which he is not, and never has been, a member, is trading under false pretences, and, in consequence, is amenable to the law which protects people against such practices.

F. E. R. (Walthamstow).—Moving Bees.—Bees may be moved with safety a distance of thirty miles at any season of the year if properly prepared for the journey. Your original query was so worded that we dealt with it as a case of possible loss of bees owing to their returning to the old stand, which they will do if the distance is within one mile.

Suspected Combs.

F. L. (Andover).—Dead brood in combs is chilled only, not foul. The young fully-matured bees, however, were alive, and several had already hatched out when comb reached us.

P. (Warminster).—Comb is affected with foul brood.

J. C. B. (Harrow-on-Hill).—Comb contains nothing worse than mouldy pollen.

Jumbo (Knutsford).—No disease in comb. Cells are mainly filled with old mildewed pollen with minute numberless live insects known as pollen-mites.

J. L. (Banbury).—Comb sent shows a bad case of foul brood.

Bonus (Newark).—Comb sent is so badly diseased that we should destroy the whole contents of hive, bees and all, unless the latter are strong in numbers, which is more than doubtful.

Nemo (Staffs). — Comb sent contains nothing but honey (or syrup) and pollen; no sign of brood at all.

Honey Sample.

Grip (Ellon, N.B.).—Sample of granulated honey is very good indeed. It is from white clover, and colour is quite as usual. The grain is, however, coarse and hard, a fault that could have been got over by an occasional stirring in bulk while liquid.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

ORDERS TAKEN NOW for SWARMS, 12s. 6d., 13s. 6d. Three-Frame Stocks, with Fertile 1904 Queen, 12s. 6d.—W. WOODS, Normandy, Guildford.

GOOD HOME OFFERED for useful Pony, temporary or permanent; very light work. References given.—"A.," "B. B. J." Office.

QUEEN REARING.—Compressed cells, in Swarthmore wooden shells, 1s. 3d. per dozen. Grace Cell Compressor, 5s. 6d.; with rapid filler, 1s. 6d. extra. Miniature Nuclei Boxes, to hold five frames, 6 x 5½, best for English climate, 1s. 3d. each. Strong, and well painted.—GEARY, Barwell, Hinckley.

QUEEN BEES of 1904. Can spare a couple, of first-rate quality, at 4s. each.—CHARLES LODGE, High Easter, Chelmsford. H 27

OBSERVATORY HIVE, 13s. Barstow Stone Filter, 13s. Or Exchange.—TATE, Throstle Nest, Horsforth. H 26

PRIME NATURAL SWARMS, soon ready, from first class Bar Frame Colonies. Sent in Abbott's Swarm Boxes. Price 12s. 6d. and 15s. each.—PERCY WILKINS, Bee Farms, Wantage. H 25

SWARMS.—Natural, healthy May and June, 8s., 10s., 12s., according to weight and season. Free on rail. Box returnable. Deposit. — PRESBYTERY APIARY, Marnhull, Dorset. H 24

STRONG, Healthy, Natural SWARMS, 12s. 6d. Safe arrival guaranteed. — CADMAN, Codsall Wood, Wolverhampton. H 23

Editorial, Notices, &c.

THE SHOW AT PARK ROYAL.

EXTENSION OF TIME FOR CLOSING ENTRIES.

We are very pleased at being enabled to state that the date for closing entries at the "Royal" Show in June next has been extended to May 29, at ordinary fees. This concession has been made with the view of enabling bee-keepers to take advantage of the improved weather conditions now prevailing, and give them an opportunity of coming forward and—shall we say?—winning prizes. For some days prior to the original date fixed (May 15) adverse weather has no doubt had the effect of checking entries very much, but with warmth and sunshine, such as is now causing honey to come in well, and with bees swarming—as reported in this issue—and a couple of weeks in hand, we trust that readers will show a little enterprise, and send to Mr. Young for a schedule. Full particulars will be found in advertisement on opposite page, and it should be remembered that the chances for amateurs owning a few hives to win on the show-bench are far greater at this time than at any other period of the year.

MR. COWAN'S TOUR IN AMERICA.

Referring to our Senior Editor's tour in America, we were very pleased to see in the May issue of *Gleanings*, just to hand, the following appreciatory notice from its editor, Mr. E. R. Root, of a call made by Mr. and Mrs. Cowan on their way to California:—

DISTINGUISHED VISITORS AT MEDINA.

"We have just had the pleasure of a visit, although a short one, from Mr. and Mrs. Thos. Wm. Cowan, of the BRITISH BEE JOURNAL. They were on their way to their residence in California, from which they have been absent for some time.

"Mr. Cowan needs almost no introduction to the readers of *Gleanings*. He is the inventor of the Cowan honey-extractor, and various other devices. Besides being the Editor of the BRITISH BEE JOURNAL, and Chairman of the British Bee-keepers' Association, he is the author of the 'British Bee-keepers' Guide,' of which 50,000 copies have been printed in English alone. Not only this, it has been published in *eight different languages*. Notwithstanding our A B C book has had a larger aggregate sale in English, yet Mr. Cowan's 'Guide' has the honour of being the *only* bee-book that is almost world-wide in its influence.

"Mr. Cowan is also the author of a beautiful scientific work on 'The Honey Bee.' This has gone through two editions, and, besides, is also printed in two or three different languages. Mr. Cowan is, without doubt, not only the most widely-known bee-keeper, but the best-posted man on both scientific and practical apiculture in the world. Knowing this, American bee-keepers will always be glad to do him honour."—*Gleanings* (American).

SURREY BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING.

The annual general meeting of the above association was held in the County Hall, Kingston, on Saturday, April 29. Mr. William Welch, C.A., presided, and amongst others present were Messrs. A. Seth-Smith, chairman of the Executive Council, Walter F. Reid, A. H. Miller, G. M. Walker, J.P., C. T. Overton, A. Webster, T. Earl, J. Hunt, A. Watkin, A. E. C. Mumford, F. Hatt, T. H. E. Watts-Silvester, J. Kachler, Albert Greenslade, F. H. White, E. A. Stopford, J. R. Aubrey, W. Sole, and F. B. White, hon. secretary and treasurer.

The Chairman, before commencing the business of the day, referred to the loss they had sustained in the death of Mr. E. J. Halsey, late Chairman of the County Council, and said Mr. Halsey had always taken a keen interest in technical education and in the bee and honey industry. He moved that a message of condolence be sent to Mrs. Halsey and the family. Mr. Seth-Smith seconded, and the resolution was carried unanimously.

The annual report stated that during the year 130 new members were enrolled, and, in spite of withdrawals, the total membership was now 643. In regard to technical instruction in bee-keeping, the executive reported the expenditure of the Surrey County Council grant of £150 in carrying out a course of lectures and demonstrations, and in providing experts to visit and advise bee-keepers, etc., and were pleased to state that the grant was to be renewed for the present year. The following account of the work of the experts was given: — Bee-keepers visited, 564; frame-hives examined, 2,708; skeps examined, 354; total stocks examined, 3,062. The balance-sheet showed a reserve fund of £93 0s. 1d., while the balance standing to the good in the general fund was £15 14s. 9d.

The Chairman spoke of the satisfactory nature of the report and balance-sheet, and moved their adoption. The motion was seconded and carried *nem. con.*

Mr. Seth-Smith moved a hearty vote of thanks to the Surrey Education Committee for their grant of £150, and spoke of the enormous benefits which the grant bestowed on the bee-keepers of Surrey. The

motion was carried, and Mr. G. M. Walker, a member of the Surrey Education Committee, said they were trying to keep the education rate from going up any higher, but he was sure they would not do it at the expense of that grant of £150.

The resolution was seconded and carried unanimously.

Mr. Walker, as a member of the Surrey Education Committee, thanked the members for the vote of thanks, and said he was sure, although the education rate in Surrey was mounting up, there would be no attempt to veto the grant of £150 to that association, because they felt it was money well spent.

Votes of thanks were also passed to the retiring executive council; and Mr. W. F. Reid, in acknowledging the vote, said the greater part of the work was borne by their able secretary, and he thought no one could do the work better.

Mr. Seth-Smith proposed a vote of thanks to the hon. secretary, and paid a high tribute to that gentleman's ability.

The resolution having been unanimously adopted,

Mr. White, in reply, said he had been connected with the association from its foundation, and had always taken the deepest interest in its welfare and success. He felt pleased to know they were at the top of the tree at the present time.

The executive council were then elected as follows: — Messrs. Archibald Seth-Smith, F. J. Bernau, W. A. Dawson, F. S. Fletcher, G. C. Halahan, John Kaehler, Joseph King, J. W. Lewis, A. H. Miller, W. F. Reid, W. Sole, E. A. Stopford, E. Walker, A. Watkin, T. H. E. Watts-Silvester, and F. B. White.

The meeting terminated with a vote of thanks to the Chairman.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5881.] We have had a spell of fine weather after May-day had passed, but the festive day in our village came in a perfect roarer. The Beedon children's garland was blown to pieces as they perambulated the village when "going a-Maying." Later on it became calm and bright, and since then the bees have fairly revelled in the sunshine and flowers. It has been a very great help in building up stocks, though the adverse weather in April left a big leeway to make up; because, be the weather ever so fine, it takes the same period to produce bees. I have heard of two swarms from stocks located in a valley near here—happily, bee-men who follow the advice of their forefathers: Always locate your hives in the shelter of a valley so that the bees may reach home easily when laden with honey and pollen. We on the higher ground have to wait patiently for swarms till towards the end of the month. The prospects for the season are far more promising than when I wrote last, the sunshine having made a great improvement in the grass crops. Vetches also are growing well, and the more forward fields will shortly provide good bee-forage, as will also the dandelion and trefoil—just showing a few blossoms. Sycamore and horse-chestnuts, too, are bursting into bloom, with many other flowers in the woods and waysides.

Queen Wasps.—These seem to be plentiful this spring. One evening last week I killed thirteen in my home-apiary. They secure a lodging in roofs of the hives, and are easily killed in the gloaming. Turn up the hive-cover gently, and, when seen, crush them with a piece of wood. I have probably killed over fifty this season already.

Spreading Brood.—In doing this, careful note must be taken of the weather, condition of bees, present size of brood-nest, and the capacity of hives. If stocks are growing, and expanding their brood-nest rapidly and well, leave well alone. But where stocks are not progressing so favourably, a little attention will often help them on. A frame of hatching brood may be given from an extra strong stock (where swarms are not wanted), replacing the removed frame with a full sheet of foundation (wired). This frame of brood should be placed right in centre of stock requiring same; and do not keep the hives open longer than absolutely necessary.

Prepare racks of sections and boxes of shallow-comb for putting on hives as soon as the honey-flow starts; always use excluder zinc between brood-combs and shallow-combs, and if you have fully drawn-out sections in any quantity (especially if there are drone-cells in the section-combs), use an excluder, or they will probably be spoilt with brood.

Get hives ready for swarms, using full sheets of foundation, preferably "wired"; but do not omit to embed the wire, not leaving it simply stretched across the frames, expecting the bees to do the rest. The aim of wiring is to prevent the "sag-

ging," so often found when done by a novice.

If you have any needy stocks, see that they do not run short of food just now. Strong stocks will store honey when weaker ones can hardly get a bare living; therefore, help the weaker stocks, the others can often take care of themselves.

Swarms received from a long distance should be fed at once on arrival; and those who wish to start well in bee-keeping should begin with new hives and prime swarms, with queens of the previous year, hived on full sheets of foundation. By so doing you will be on the royal road to success—that is, if you give intelligent attention to your bees, and follow the instructions in the "Guide Book."—W. Woodley, Beedon, Newbury.

MR. COWAN IN AMERICA.

[5882.] After reading in the B.B.J. of April 13 of Mr. Cowan's proposed trip to America, and that he would, on his way back, call at Philadelphia and pay me a visit, it may be you can imagine how surprised and pleased I was to get a letter on the 22nd announcing his arrival at Boston the day before, and that he was coming on to Philadelphia two days later and hoped to see me on the following day. I made an early call at his hotel and was very glad to see him looking so well, and both Mrs. Cowan and himself so little changed since I saw them last some years ago. I was sorry to learn of their having had a rough passage across the Atlantic, but they seemed little the worse for it. It appeared that Mr. Cowan found he could arrange his tour better by taking Philadelphia first, then going on to Cleveland, and breaking his journey of over 3,000 miles to the Pacific coast by stopping at Chicago, Denver, Salt Lake City, and San Francisco. He then had only 125 miles further south to travel in order to reach "Pinehurst," his residence at Pacific Grove, California.

We had a long and pleasant talk of old times and about old friends, regarding whom I had many inquiries to make. Mr. Cowan also conveyed to me the very kind message of greeting and good wishes from the annual meeting of the B.B.K.A. in March last, which I fully appreciate and thank the members most heartily for.

In the afternoon we went to the Pennsylvania University and I introduced Mr. Cowan to Dr. E. F. Phillips, who is much interested in the anatomy of the bee, several of his articles having appeared in *Gleanings*. Unfortunately the Doctor was not in his laboratory when we made our call, and on going to his rooms, we found him kept indoors suffering from an eruption caused by his coming in contact with what is known as "poison ivy" when out botanising. He expressed his regret at being unable, in consequence, to show us his drawings and the work he was engaged upon. Dr. Phillips was, however, very much pleased with Mr. Cowan's splendid coloured drawings of the anatomy of the bee, which the latter had brought with him from England. Next day we journeyed out to Swarthmore and saw Mr. Pratt and his apiary. The weather having been very cold for some time, he had not commenced queen-rearing, but he opened one of his hives without any use of smoke—and after examining four frames covered with bees, Mr. Pratt found one of the beautiful golden queens from which he breeds quietly moving among the bees, none of which were the least excited and made no attempt to fly. Mr. Pratt fully explained to Mr. Cowan his appliances and system of queen-rearing. We also saw some fine golden-coloured drones, and inspected the arrangement made for trapping the undesirable ones, without in the least interfering with the working of the bees, as is the case when the "Alley" trap is used. Mr. Pratt, too, was much interested in Mr. Cowan's beautiful drawings of the bee.—John M. Hooker, Philadelphia, May 1.

QUEEN REARING.

[5883.] "*Swarthmore*" *Methods.*—Referring to the article (Mr. J. M. Hooker's) in B.B.J. of May 4 (5872, page 174), I should also be pleased to know that our British bee-keepers are turning their attention to the "Swarthmore" methods. Personally, I confess to being surprised at the lack of interest shown.

Should a discussion get up on the Foul Brood Bill, on the buying in of prize exhibits, the consequences are appalling. Lengthy epistles fill the B.B.J. to the exclusion of everything else, and misguided individuals belabour each other in print until, in the interest of suffering humanity, our Editors are compelled to call "Halt!" Yet, when an important method that may revolutionise the queen-rearing business is placed before us, how do we receive it? With "torrents of criticism"? Not a bit of it. Merely with chilly, insular indifference. In the face of such a reception, Mr. Hooker is to be congratulated on his persistency in keeping the subject well to the front in these pages, and it is to be hoped that the "Swarthmore" methods and section-nuclei will get a thorough trial throughout our country this season.

The Spring Examination.—In many cases this has still to be seen to. December to March, inclusive, were fairly mild, open months. The real winter, which came with,

and monopolised, the month of April, put a stop to premature overhauling and feeding of stocks. Those bee-keepers who neglected their bees in autumn, and have been giving candy and syrup since February, have had a bad time, what with "dear sugar" and unfavourable weather.

My own stocks have still plenty of stores, and are very forward for the time of year. This is particularly noticeable where wintered in double-storied hives. The large frame colony is in excellent condition, covering ten "Quinby" frames and the stored shallow-frame super on top, also full of bees, which means that the stock covers considerably more than the equivalent of twenty standard frames.

The amount of pollen carried in on favourable days is quite astonishing, and augurs well for a good yield of honey.

The queen is taking care of this large brood-nest for the third season, and shows no sign of abating vigour, which I consider to be owing partly to inherent vitality, and also to the fact that she was reared in an extra powerful colony.

All my other stocks are headed by last year's queens, but only one of them approaches the strength of the large-frame colony. The one I refer to was wintered on eighteen standard frames of sealed stores. What the lower body-box is like I do not know as yet, but the upper storey is full, the raising of the quilt showing bees at all four corners.

No feeding or manipulating has been done as yet, but the great heat beneath the quilts, and the activity displayed in pollen-gathering, are sufficient proof that all is well. Considering that our honey-flow is still six weeks distant, it becomes quite a pretty problem how to handle such stocks that they may not swarm prematurely and unexpectedly, and so dash our hopes to the ground.—J. M. E., Ussie Valley, May 12.

A PERFECT SPRAY DIFFUSER.

[5884.] A spray diffuser is essential to the up-to-date bee-keeper, whether for disinfecting or uniting purposes, but the great difficulty is to get a good one. All those which depend on india-rubber balls and connections are of short life, and have to be continually replaced. I have just been fortunate in finding a spray-diffuser which is simply perfection. It consists of a cut-glass container for the fluid, surmounted by a non-rustable metal top, of which a small force pump forms a part. It cannot very well get out of order, and throws a fine continuous spray to a good distance. There are no rubber parts, except the washer of the piston, and the washers used to exclude the air where the cap is screwed on to the bottle. It is a pleasure to use it. I got mine for 4s. 6d. from a hair-dresser; the proper price is 6s. 6d., but he had it in stock for a long time and sold it at a reduction. It is certainly worth ten of the rubber-ball type, and being all in one piece is convenient to use. The season, so far, has been very bad for bees; very cold and wet even here in Cornwall. W. J. Farmer, Redruth, May 4.

ANOTHER EARLY SWARM.

[5885.] Mrs. Wright would like to inform the Editors of the B.B.J. that she had a swarm of bees from one of her hives at noon on May 6, and being so much farther north than Surrey, she would like to record it, as being one day earlier than "an early swarm" mentioned on page 184 of B.B.J. for this week.—Flints, May 13.

A MAY SWARM IN SCOTLAND.

[5886.] I thought it might be of interest to readers of the B.B.J. to know that a strong swarm left one of my hives yesterday (May 13). Is this not very early for a swarm in Scotland?—J. M'D., Dollar, N.B., May 14.

[We very seldom hear of so early a swarm as the above so far north.—Eds.]

(*Correspondence continued on page* 196.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The information, furnished in response to our request, is interesting and instructive. Mr. Patey is evidently a bee-man of the right kind, and his notes need no addition from us:—

"The photo sent shows a part of my apiary which is located in an orchard and contains at present fifty-eight colonies of bees, all in frame-hives. The building at the back is my house, and the open door and windows shown is the workshop, where I carry on the business of a boot maker. The main coach road, between Dartmouth and Kingsbridge runs along the front of house, but the bees have never been a cause of complaint, either from passers-by or neighbours.

"I started bee-keeping seventeen years ago, and at that time knew nothing whatever about their management. I had seen a neighbour cruelly, as I thought, consign a skepful of bees to the sulphur-pit as a reward for their industry. Having heard that the little labourers could be deprived of surplus honey without such cruelty, I determined to experiment. Purchasing a stock in a straw skep, I was eager to obtain some practical knowledge of the better way and was fortunate in hearing that there was an empty frame-hive for

sale in the next village. This I purchased and got with it a dealer's catalogue in which I saw the 'Guide Book' advertised, This I immediately procured, and read it through with interest several times over.

"My bees swarmed in the following spring, and the swarm were duly hived in a skep, but this job was not quite so easily done as said in the book owing to my being very nervous at the time about getting stung. I had filled the frame-hive with full sheets of foundation, and in the evening, spreading a sheet on the ground, I placed the hive in position—duly propped up in front—and with much fear as to results, threw out the swarm on to the sheet with a jerk, and immediately scampered off to the workshop, from whence I saw the heap of bees quietly spread themselves out, without taking wing, and begin to run steadily in the prepared hive like regiments of soldiers marching. I thus realised my foolishness in running away, for the bees did not seem to resent the rough treatment in the least. I got a rack of sections from this swarm that season. In the autumn I increased my stock by driving two lots of condemned bees—without having seen it done by any one before—and successfully feeding and building them up for winter. It speaks well for the instructions contained in 'Guide Book' when I say that after having since driven a good many lots, I never made a better job of it than with my first attempt.

"My largest take of honey was in 1903, when I secured just one ton of surplus in about equal proportions of comb, and extracted from forty stocks. I have started several others in the craft, all of whom are now progressive bee-keepers, and own from six to twelve stocks, all of which are well managed and kept in good order. With regard to my own management, I have followed the advice regularly given in your pages and by leading contributors thereto; I am also fortunate in never having had foul brood in or near my apiary.

"Only myself is seen in photo, but my good wife comes in for a considerable share of the bee-work, especially in preparing the sections for market. She can also shake a swarm and frequently helps me in many ways with the bees.

"In concluding these rough notes, I see it is usual to add a few words referring to the personality of those whose bee-gardens are illustrated in our journal. In this line, therefore, I may say I hold the office of parish clerk, which office my grandfather and father held before me. I have also been a member of our Parish Council ever since its inception, and am Assessor and Collector of Income tax for the parish, so you will see I am a fairly busy man."

MR. HERBERT PATEY'S APIARY, CHILLINGTON, KINGSBRIDGE, DEVON.

CORRESPONDENCE.

(*Continued from page* 194)

BEES AND PHILOSOPHY.

[5887.] Mr. "W. J. F., Redruth," well deserves the gentle reproof added to his letter (5879, page 184) by the Editors last week. It seems to me that he spoils the pages of our JOURNAL by expressing opinions only worthy of, and in fact suggested by, pagan philosophers of two thousand years ago. I think he might spare the infliction of such antiquated ideas on the simple and honest folk who form the greatest part of the B.B.J.'s readers. Before he writes his next article, I would advise him to meditate a little on the words of Festus to St. Paul: "Much learning doth make thee mad"; and then see whether his conscience allows him to add: "I speak words of truth and soberness."

Happy are those who can have sections filled before the time of the "Royal show." I have often heard of the honey coming from apple-blossoms being highly valued. But in this part of Devon we never have the chance of getting sections filled or any extracted honey before the middle of July, although we have plenty of apple trees. Let us hope that the present year may prove an exception, as the outlook is so promising. I send name, and sign—DOM MAURUS, Devon, May 15.

SPRAYING BEE-FORAGE.

[5888.] In answer to your request for information on the above subject, in reply to query No. 3725 (page 178), charlock, when in an advanced stage of growth (and in flower), about 15 lb. of sulphate of copper, is added to 100 gallons of water, and generally 10 lb. of treacle is also mixed to give the dressing a sticky nature. Probably the bees go for the sweets, but I cannot say what effect sulphate of copper may have upon them; although it is considered by many people in the mining district of Cornwall that it is impossible to keep bees for any length of time owing to so much mineral being on the surface, which fouls the drinking water. This is especially the case with arsenic, which to my knowledge bees and wasps will take when in a pure state. This is quickly noticed by visiting the arsenic works of Cornwall. However, we may be enlightened on my latter remarks by one of your contributors, who, I notice, is just moving his bees to Redruth, where copper phosphate is plentiful.—W. H. B., Cornwall, May 9.

Queries and Replies.

[3739.] *Making Artificial Swarms, according to "Guide Book."*—I am much interested in the BEE JOURNAL and monthly *Record*, both of which I take regularly, but being only a beginner, your advice with regard to the following will be very helpful. In Mr. Cowan's "Guide Book," chapter 15, dealing with artificial swarming, we are told (on page 94) how to make three colonies from two; but I am not quite clear with regard to the plan given, and therefore ask: 1. Is it a fact that when the swarm (artificial) is placed on the stand previously occupied by a strong stock, and this stock is removed to another position, bees belonging to the hive carried to a new stand will not return to the old position now held by the swarm? The paragraph says: "Remove another strong stock to a new stand." How far does this mean? It is only convenient for me to move my hives within a space of, say, twenty yards, and an expert tells me the bees would return to the old position. Should the move be made to a much greater distance, or how can it be done? 2. Do bees always take fresh bearings when in a new position? Thanking you for anticipated reply.—G. H., Bedford.

REPLY.—If our correspondent will again read the directions given on page 94, and carry them out carefully, no such difficulty as he supposes will arise. As a matter of fact, it is the bees of "the strong stock removed to a new stand" that constitute the artificial swarm by returning to their old location. The new hive placed on the stand from which the strong stock was removed, contains only five frames of brood and several frames fitted with comb-foundation, but no bees at all. Therefore, until furnished with bees from the removed hive it cannot be occupied by an "artificial swarm."

[3740.] *Transferring Bees.*—I have two stocks of bees, one of which is a skep. I am transferring the bees of latter into a frame-hive by placing the skep over the top of frames. The bees in skep are a strong lot with a young queen; the frame-hive lot is rather weak, and has a four-year-old queen. I should be very glad if you will tell me through your next issue of the B.B.J.: 1. How to make two strong stocks of them? 2. How to re-queen the weaker lot, and the best time for so doing? I might say the skep was placed over the frame-hive on April 21 last. I send name, etc., for reference, and sign—H. G. R., Beccles, Suffolk.

REPLY.—The particulars furnished above

leave us in the dark as to the present connection between the two stocks of bees. We must, therefore, ask for some further light before replying to your query. 1. Are the two stocks still working independent of each other, and through separate entrances? We ask this because the two lots are dealt with as if this was the case. Yet we are told that the skep was placed above the top-bars of frame-hive so long ago as April 21. On the other hand, if it is desired that the bees in skep should transfer themselves to the frame-hive, as stated, there will only be one stock (not two) to deal with. Please clear this up, and we will then reply to query.

[3741.] *Queen Killed when Supering.* — I should be glad if you can tell me something about enclosed dead queen. Is she young or old, pure or hybrid, and if the latter how crossed? I am anxious to know this as I found her to be a most prolific and good-tempered queen. I was unfortunate enough to accidentally crush her between the end of frame and body-box — which latter was packed full of brood on ten frames — while scraping the top-bars previous to putting on a rack of sections. This is my first bit of bad luck for the season, all my hives—nine in number—having come through the winter all right. — F. J. G., Sidmouth, May 12.

Reply. — The dead queen sent is apparently an adult—not very young, and certainly not old. There is no trace of foreign blood at all, just the ordinary common brown bee of this country, such as are not seldom found to possess all the qualities named without being a bit showy either in appearance or size. It is a great pity to have her killed while doing so well.

[3742.] *Dealing with Queenless Stocks in May.*—On looking through my hives again to-day, I was sorry to find one stock queenless. They are a splendid lot of bees with plenty of honey in store, so it would be a pity to lose them. I therefore ask: 1. Would you advise me to take a frame from another stock—in which is a queen-cell, and young queen will soon be ready to hatch out—and give it to the queenless lot? 2. If the above proposal is carried out would it be likely to stop the bees of the hive from which the young queen is removed from swarming? An answer giving your opinion of the above will much oblige.—W. E. C., Portmore, Weymouth, May 11.

Reply.—1. The mention of bees in hive now queenless being "a splendid lot" conveys the impression that the colony referred to has not been long queenless; and this view is strengthened when you allude to "looking through the hive again to-day," thus implying that it was all right not long ago. If this be so, there should be some visible signs of the bees having attempted to raise a successor to replace the lost parent-queen; but no mention is made of any such signs. However, if we are right in our conclusions on the point, by all means remove the frame with queen-cell as proposed, and the bees should allow the young queen to hatch out all right. 2. Swarming in the second stock will not be stopped or delayed so long as there are other perfect queen-cells in the hive besides the one taken away.

[3743.] *Effects of Cold Nights on Brood in Hives.*—Will you kindly let me know through the B.B.J. if the enclosed comb is affected with foul brood? We have had some very cold nights here of late, and I am therefore hoping it is chilled brood only. The stock I took the comb from is very strong in bees, and most of the eleven frames of comb are covered with eggs and brood. Your kind reply will be esteemed by an old subscriber.—W. E. S., Worcester, May 13.

Reply.—There is no doubt that the brood in comb, which had reached the nymph state before death, had died from cold or "chill," but in some of the younger larvæ we find slight signs of foul brood in the incipient stage. We advise keeping a careful watch on the way sealed brood hatches out, or fails to do so. The bees are stated to be very strong, and field-forage is now available; the stock may, therefore, get over the trouble without the need for taking drastic measures.

[3744.] *Transferring from Skep to Frame-hive.*—Will you be so good as to give me your valuable advice on the following matter?—I have been transferring bees from skep into a frame-hive in the manner described in the "Guide Book." The queen having gone down, I have now put on an excluder and replaced the skep. While doing so I noticed a considerable amount of drone-brood in the latter. Now, with the excluder on, the drones are imprisoned in the skep, and it seems to me that there they must remain so until either they die (and even then their bodies are still there), or I remove the skep entirely, which I hope to do about the end of June. I therefore ask: 1. Will it do any harm to leave them until that date? It seems to be rather rough on the poor drones to shut them up. 2. Is it usual to find more drones in a skep than in a frame-hive? Thanking you for an answer, I enclose name, etc., and sign—Larbee, Sidcup, Kent.

Reply.—1. If the bees have completely transferred their brood-nest below, and queen has plenty of room for egg-laying in the combs of frame-hive, we should remove

the excluder without delay. There is only a very remote chance of the queen passing into the skep now that honey is beginning to come in; and the bees will get on better if drones are liberated. 2. Yes; because the advanced bee-keeper takes measures to limit the number of drones to a small number, while the skeppist leaves it to the bees themselves.

[3745.] *Fertilisation of Queen Bees in Confinement.*—Will you kindly tell me whether there is any recognised method of fertilising queens by selected drones, or can you refer me to any book which deals with the subject specially? I have read what is written on the subject of "Fertilisation in Confinement," by Cheshire, Quinby, Langstroth, and Root, and I conclude that the whole subject of select fertilisation is still in the experimental stage. But I am led to ask the question, because of the frequent references I find in chapters on Parthonogenesis in the standard bee-books to cross fertilisation between a queen of one race and a drone of another; and I would very much like to know whether there is any practical way of determining this cross fertilisation otherwise than by its hereditary effects.—E. G., Maidenhead, May 13.

REPLY.—Notwithstanding all that has been written and said with regard to the fertilisation of queen bees, in confinement, we fear the question is no nearer to practical solution than it was ten or fifteen years ago. The subject is of much interest to bee-keepers, no doubt, and it has been taken up by able men in America, since the authorities you name were in evidence. But the experimental stage has still to be passed, and, personally, we have very little hope of any really useful method being devised for securing the object in view.

[3746.] *Starting Bee-keeping.*—I want to take up bee-keeping as a hobby, and thought perhaps you would know of some bee-keeper in this neighbourhood of whom I could beg a little advice and instruction. At present I know nothing whatever of the art, and possess nothing connected with the craft. I must get a hive and bees, but should be much obliged if you would advise me how best to start. I have Mr. Cowan's "Guide Book" and the current number of the B.B.J., but no more.—J. R. W., Ripley, Surrey, May 10.

REPLY.—We think your best course will be to become a member of the Surrey Bee-keepers' Association, the hon. secretary of which would put you in the way of making a start on proper lines. He would also give you help by sending an expert to advise you if necessary. Address: "Mr. F. B. White, Hon. Sec. Surrey B.K.A., Marden House, Redhill."

[3747.] *Making Artificial Swarms.*—Would you kindly answer following: We have four strong stocks of bees, from which we wish to make artificial swarms next week, weather permitting. Could we take queens away from swarms at time of swarming, and give ripe queen-cells at the same time, as to stock hives? We bought these stocks last year in skeps, and consequently do not know age of queens. We have a nucleus-hive, rearing queens, the frames of which were taken from a stock having last year's queen. We follow "Guide Book" in all particulars, but cannot find any answer to above. We send name, etc., for reference.—GEO. A. AND J. W. D., Leicester, May 6.

REPLY.—It is not stated which of the three methods of making artificial swarms given in "Guide Book" you propose to follow; and we, therefore, cannot give precise directions. We may, however, say that ripe queen-cells should only be given to bees that have been deprived of their queens and left to raise another from brood in their hive. In this case also the cells should not be given till the second day after the operations, or the bees may tear the cell down and destroy its inmate.

[3748.] *Granulation of Honey.* — I have noticed in the market a thick, white honey, which seems to be in a half-crystallised condition and is not so sweet as the ordinary liquid honey in the combs. Having just started bee-keeping I am anxious to know by what process the above results may be obtained. Has the honey to be kept a year, exposed or sealed up? as, without chemical process, this seems the only possible way. I should be much obliged if you or some of your readers, could help me obtain the desired results.—J. F. J. W., Edgbaston, May 13.

REPLY.—We should like to see a sample of the honey referred to before giving an opinion with regard to its "half-crystallised condition." It is not easy to judge honey from description given by a beginner in bee-keeping, but will be very pleased to say what our view is if sample is sent.

Echoes from the Hives.

Altrincham, Cheshire, May 8.—The sycamore trees are now bursting into bloom, and bees will soon have a continuous forage-ground. Nine frames brood (fourteen sides) was the good total of two splendid stocks examined in Stockport and Northenden district last week. Colonies headed by young queens are, as a rule, rather backward in condition. Splendid

weather prevails, and the mornings are made merry with the songs of our feathered friends, amongst which are the somewhat long-delayed notes of the cuckoo..—JAS. WADDELL, Expert (on tour).

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 8 to 12, at Bournemouth, Hants.—Show of Honey, Hives, etc., in connection with Royal Counties Agricultural Society's Show. For schedules apply E. H. Bellairs, Christchurch, Hants. **Entries close June 3.**

June 14 and 15, at Southend-on-Sea.—Annual Show of the Essex Agricultural Society. Bee and Honey Section under the management of the Essex and Suffolk Beekeepers' Association. Classes open to the United Kingdom. Schedules from Mr. G. R. Alder, Rawreth, Essex. **Entries close May 31.**

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 29, at ordinary fees.**

July 13 and 14, at Grantham.—Show of Honey, Hives,, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon, Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 13.**

July 19, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 12**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entry to members. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts.

August 16, at Wye. Kent Honey Show Numerous classes for Honey and Bee products Liberal cash prizes. Open Classes for single 1 lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

H. J. P. (Pontypridd).—Queens Not Laying in Spring.—Experts' Certificates.—1. It is impossible for us to tell why the queen has not begun to lay without having some particulars to guide us in forming an opinion. You had better inquire of the gentleman from whom the queen was purchased, and who is now sending a second queen to replace the non-laying one. 2. A considerable amount of practical knowledge regarding bees and bee-keeping is indispensable before an expert's certificate of the B.B.K.A. can be gained. Write to the sec. (Mr. E. H. Young, 12, Hanover Square, London) for particulars and names of books to be studied when preparing for the examination.

J. M. B. (Cornwall).—Damaged Combs in Hive.—Judging by photo the damage appears to have been done by mice. Yet we do not usually suspect these little animals of eating bees! Anyway, it seems clear that a good number of bees had died in the cells (head-foremost), as they do when foodless, and the bee-enemy, whatever that may be, has made several meals off the remains.

H. J. C. (Shalfont).—Homes of the Honey-bee.—The Rev. R. M. Lamb's apiary was illustrated in B.B.J. of July 28 last year. His address is Burton Pidsea Rectory, near Hull, Yorks.

W. L. (Coventry).—Joining B.K. Associations.—1. The Hon. Sec. of the Warwickshire B.K.A. is Mr. J. Noble Bower, Knowle. 2. We advise you not to paint the inside of extractor. 3. Bee sent was smashed out of recognition in post through unsafe packing.

CARBON (Co. Durham)—Bee Nomenclature. —The wild bee sent is a male of *Osmia rufa*. There are several species of *Osmia* native to England; *O. rufa* is the most abundant and most widely distributed of them. It generally nests in holes in the ground; other species nest in holes in wooden posts, and *O. aurulenta*, a very

beautiful species, common in some chalky districts in the southern and eastern counties, nests in empty snail shells. The bees of this genus collect pollen on a brush on the under surface of the abdomen and not on the hind legs as most other wild bees do.—[F. W. L. S.]

NOVICE (Bridge of Allan).—Cutting Out Queen-cells to Prevent Swarming.—This operation cannot be regulated to a given day, but must be undertaken whenever the bees threaten to swarm. In other words, sometimes the bees will give up the idea of swarming after queen-cells have once been removed, and at other times they will swarm in spite of repeated cutting-out of cells.

R. N. C. (Boston).—Honey Vinegar.—The Rev G. W. Bancks's pamphlet on the above can be had from this office, post free, for 2½d. in stamps.

F. R. S. (Bungay).—Pollen-mites in Combs.—The minute white insects are pollen-mites. They breed in combs containing pollen, and gradually turn it into dust as stated. If you can clear the combs from the pollen débris and mites they may be used again in the hive.

Suspected Combs.

C. F. M.-M. (Alford, Lincs.).—Comb sent is clean and quite free from disease, the cells containing nothing worse than hard, mouldy pollen; but, being almost wholly drone-comb, it is useless in the hive, and all such should be melted down for wax.

H. G. R. (Suffolk).—Your sample must have miscarried in post, as it cannot be traced. It is also impossible for us to undertake to send post replies to queries.

WILLOW (Ayrshire). — There is no foul brood in either sample of comb sent; both contain chilled brood only.

A. W. (Sutton Coldfield).—1. Comb shows a bad case of foul brood. 2. It is quite possible that the hive from which comb has been cut may have been free from disease at end of last August; but the worst cells are certainly not brood from eggs laid this year.

D. L. J. (Suffolk).—Foul brood is just beginning to show itself in comb sent. This is less regrettable than it might have been, as the stock is evidently headed by a drone-breeding queen.

J. R. (Erith, Kent). Comb is very badly affected with foul brood, and you have done quite right in "burning the lot!"

J. T. (Hatfield Peverel).—There are distinct signs of foul brood in comb, but it does not appear to be a bad case; indeed, most of the brood in sealed cells would have hatched out if left in the hive. The comb, however, is faulty, old, and mis-shapen, with too many cross-built drone-cells in it. No such combs should be tolerated in a frame-hive and ought to be replaced by straight ones, built out from full sheets of foundation.

PERSEVERING (Bristol).—1. Comb shows slight signs of foul brood. 2. The distinctive difference between foul brood and "chilled" brood is that the larva in latter, after death, becomes grey and then black in colour without losing its crescent shape, while the larva which dies from foul brood changes from pearly-white to a light buff colour, later on turning to brown; not only so, but the larva becomes extended and flabby-looking in the cell when it dies. There are also other indications as seen in the illustration on page 146 of "Guide Book," which work should be studied by all who desire an insight into the bee-pest known as *Bacillus alvei*, or foul brood.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

NATURAL SWARMS soon ready, only four or five can be spared, 10s. 6d. to 12s. 6d., according to season and weight. Free on rail. Deposit with order.—MALE, Brooklands, Cottenham, Cambs. H 51

FOR SALE, cog-geared Godman's 24s. HONEY EXTRACTOR, with handles and honey tap; good condition. Price 15s.—H. SAMWAYS, Maesybont, Llandebie, R.S.O. H 50

1 STOCK OF BEES, very strong, eight frames, perfectly healthy, 17s. 6d.—HAYES, Durham County Asylum, Winterton, near Ferryhill. H 52

WANTED, FOUR strong MAY SWARMS. — W. WALKER, Plas Llyssyn, Carno, Montgomeryshire. H 49

5 STRONG STOCKS of BEES, on eight Standard frames, each comb worked from full sheets Weed foundation, 1904 Queens, guaranteed healthy, 20s. each. —J. J. HARDING, Trimdon, Trimdon Grange, Durham. H 48

SIX GRAND STOCKS, in Skeps, in sound condition, 15s.—BRADSHAW, Allerston, Pickering. H. 47

GOOD Second-hand Standard HIVES, 6s. 6d., carriage paid.—REV. JARVIS, Coleford, Glos. H 46

44 IN. x 4½in. GLASS, 2s. per gross. ¼-plate mahogany Magazine Hand Camera, complete, 10s. 6d.; or exchange Italians.—HANNAM, 70, Highgate Road, Birmingham. H 45

FOR SALE, FIVE WOODEN HIVES, fitted with lb. sections; good condition; £2 2s., or 10s. each.—Apply BURROWS, Elm House, North Town, Maidenhead. H 44

EXCHANGE, FLUTE, ebony case, silver mounts (cost £2), for strong stock of Italians or Hybrid Bees. Sell 30s. — ALBERT GITTINGS, 2, Saunders Road, Plumstead. H 43

NEW, cane-bound, straw SKEPS, 14½ x 9 14s. per dozen. Best made Skeps in England.—DEVEREUX, Shillington, Hitchin. H 42

FOR SALE, 30 STOCKS of Carniolan Black Hybrids. Orders accepted as received. Eight Frames of Bees, brood, fertile 1904 Queen, and food. All combs worked from full wired sheets foundation in patent fitting frames. Guaranteed healthy. Travelling case to be returned. Free on rail, 18s. each. Ten Frames, Hive, and two Crates, complete, 30s.—SHAW, Sedgefield, Co. Durham. H 41

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, 17th inst., Mr. T. I. Weston occupying the chair. There were also present Miss Gayton, Dr. Elliot, Messrs. W. B. Carr, A. G. Pugh, W. F. Reid, W. Sole, E. Walker, W. Woodley, and the secretary. Letters expressing regret at inability to attend were received from Col. Walker, Messrs. L. Belsham, T. Bevan, W. H. Harris, J. B. Lamb, and F. W. L. Sladen.

The minutes of the previous meeting were read and confirmed.

The following were duly elected to membership, viz.:—Mr. Harold Bevan, The Boltons, Sidcup; Mr. James Howland, Brampton, Huntingdonshire; Mr. F. W. Hunt, Lanercombe Villa, Tipton St. Johns, Devon; Mr. H. J. Offer, 32, Orchard Road, Kingston-on-Thames; Huntingdonshire B.K. Association, hon. secretary, Mr. S. Watts, Prospect House, Godmanchester, Hunts.

Messrs. W. Broughton Carr and T. I. Weston were appointed to act as examiners of candidates for Third-class Expert Certificates at Park Royal on June 28 and 29 next. In consequence of the cold weather experienced during April and early in the present month, it was decided to extend the date for receiving entries at ordinary fees for the Royal Show till Monday, the 29th inst.

Three candidates for first-class diplomas attended and delivered before the Council impromptu lectures on the subject set for the purpose.

A meeting of the Bee-pest Legislation Committee was subsequently held, when the secretary presented a statement of replies for and against the proposed Bill. As there are still several associations from whose officials no decision has yet been notified, it was decided that a further letter be sent asking for information prior to the next meeting, when the Committee propose to summarise the evidence obtained, for presentation to the Board of Agriculture.

The next meeting of the Council will be held on Wednesday, June 21.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

A NOVELTY IN BEE-HIVES.

[5889.] Nearly three years ago I drew attention, 4775, to a new patent hive about to be launched on the market by Mr. A. Reid, a prominent Ross-shire bee-keeper, but the inventor was then content to take out his patent and await results. He has since fully tested its capabilities, and now, confident of its good points, intends to give it to the public. Some of its salient features may be described now, but more will be heard of it soon, as it will be advertised in the JOURNAL, and no doubt described and illustrated among the "Novelties for 1905."

Main Entrance.—This is unique of its kind and differs, I think, from anything hitherto in use in hive-construction. It is really a greatly enlarged porch or funnel-shaped chamber leading to a point about the centre of the hive, so that the bees really enter from below, and just at the back of their brood-chamber. An easily adjustable shutter allows the full force of bees to be thrown into the back or front divisions of the twenty frames the hive is capable of accommodating on the ground floor, from front to rear; and the inventor claims that he has here a power at his command to check or eliminate the swarming instinct, as bees are at his pleasure almost forced to store or breed just where he desires they should. Some further advantages claimed for this novel style of entrances is that they are a great saving of bee-life in windy weather, as bees on slowing down on the homeward journey, are at once in a haven of rest. They invariably alight well forward, and so never get chilled by falling on the cold ground. In winter-time the entrances are not exposed to the glare of the sun when snow is on the ground, so that shade-boards are dispensed with, and yet the lives of many bees are saved.

Front Entrances.—These can be used, if desired, as means of egress, but their chief advantage is as a means of checking swarming. Drones are a fertile source for generating the impulse. By these exits, while bees pass out and in freely through the excluder-zinc, drones are compelled to seek a passage out through a cone which hinders their return to the hive. They are thus trapped and at the mercy of the bee-keeper. By this front

entrance, too, ventilation can be given winter or summer, and the amount is at the will of their owner, while, by a simple contrivance, bees can clear the floor-board of all débris in winter and spring. But the chief benefit derived from these entrances is the controlling of swarming. They are really queen-traps, and hinder her majesty's exit with a swarm. Or better still, they can be made swarm-catchers, because by an ingenious arrangement or modification of plans hitherto only partially successful, Mr. Reid maintains that he can get the queen and swarm to hive themselves in a receptacle placed above the brood-frames. Of course all these extra appliances are easily detachable, but the idea is to leave them on permanently, as they are rather an offset to the hive.

Side Entrances.—A third set of entrances are provided at the sides. These are to be used when forming nuclei, when the queen with a limited number of frames is shifted back, before the heather harvest, for the bees to raise a young queen, or when the hive is used for four stocks, as it can be when required. These side-entrances are then generally the only means of exit and entrance, although, if desired, bees can be provided with egress by the main entrance. Managed thus, the whole set of twenty frames, or double that number for a powerful double lot, can be supered in common, and managed with a perforated dummy between on the "Wells" plan. In the height of the season, when swarming is over, bees may be allowed the free use of all three entrances.

Frames and Hive Body.—There is no body-box. Frames are close-ended and the first tier rests on the floor-board, other chambers again resting on these; and all in brood-body and surplus-chambers are the same pattern and interchangeable. While ten may form an ample brood-body in early spring, at least twenty are used later. They are, however, only 6½ in. in depth, but it must be understood the depth of brood-body is double this size. In working for extracted honey frames similar in every respect are used; but when comb-honey is desired a section-frame with three divisions is provided.

The Lower Chamber.—The peculiar construction of the main entrance compels a large space being below the floorboard, and this has been utilised as a store cupboard, affording ample room for storing reserve racks of sections or supering frames until they are required above brood-body, and they have the merit of being always at hand when needed. But the chief advantage of this space is the facility it gives for clearing bees from all surplus-chambers during the honey harvest. By a simple arrangement bees are allowed to join the home-coming foragers as they make their way from the fields, so that supers are cleared in the shortest of time without any bee-escapes. Several other features of the hive will be noted later.—D. M. M., Banff.

"HOW TO INCREASE OUR STOCKS WHILE CONTROLLING SWARMING."

[5890.] Under this heading is a very interesting article in *Gleanings* of April 15, 1905, by Mr. E. W. Alexander, of Delauson, N.Y., U.S.A. Mr. Alexander is one of the largest and most successful honey-producers in the United States. For over forty years, he says, he has read everything connected with bee-keeping. One year he lost 500 colonies that had gathered honeydew. Another year, "black brood" destroyed over 1,000 colonies for him; and at another time his home and nearly all his bees were destroyed by fire, and he had only a small insurance. Not discouraged by all this, he has, by perseverance, made a grand success of the business. The locality in which he lives is an exceptionally good one for bee-keeping (not to be surpassed by any in the United States), where clover, basswood, and buckwheat thrive and give an almost continuous honey-supply.

The following is an extract from his article:—"After studying this subject for many years, and trying everything I could think of to prevent the loss of brood in making our increase, and, at the same time, avoid the loss of time in fussing with nuclei, and at all times keeping every colony in good condition, to take advantage of any unexpected harvest that might come, I hit on what I consider the most practical way of making increase of anything I have ever tried or heard of. It is this: Go to the colony you wish to divide; lift it from its stand, and put in its place a hive containing frames of comb or full sheets of foundation. Now remove the centre comb of this hive and put in its place a frame of brood from the hive you wish to divide; and be sure you find the queen and put her on this frame of brood in the new hive. Now put a queen-excluder honey-board on top of this new hive that contains the queen and frame of brood with the empty combs; then set the old queenless colony on top of excluder; put the frame of foundation in the place of that taken from old colony, and close up the hives except the entrance. Now leave them ten or eleven days, during which time the queen will get a fine lot of brood started in the lower hive, and every egg and particle of larva that was in the old hive

on top will be capped over and *saved*. Then separate them, putting the old hive on a new stand. It will then be full of mostly young bees and capped brood, and in about twenty-four hours they will accept a ripe cell, a virgin queen, or laying queen, as they will realise they are hopelessly queenless. I would advise you to give them a laying queen, as I never like to keep my full colonies a day longer without a queen than I can help. In this way, you have two strong colonies from one, and you have not lost a particle of brood or checked the laying of your queen; and with me it almost wholly prevents swarming. This is the way we have made our increase for several years, and we like it much better than anything else we have ever tried. In so doing you keep all your colonies strong during the whole summer, and it is the strong colonies that count in giving us our surplus.

"In making your increase in the above way, your new swarm on the old stand is in fine condition to receive a crate of sections, as it has a large working force backed up by having its hive nearly full of brood and but little honey, as the bees have been in the habit of storing their honey in the old hive that was on top, so they will soon go to work in the sections and have no notion of swarming.

"From an extensive experience along this line, I find I can get nearly twice the amount of surplus by dividing as above-stated over what I was able to acquire either by letting them go undivided or dividing in a way that caused the loss of a greater part of the brood. This losing of brood we must guard against at all times, if we expect to secure a fine surplus. It costs both time and honey to produce it, and it is the principal factor in obtaining those strong colonies that give us *tons* of honey. Far too many bee-keepers think that the value of their apiary consists in the number of the colonies they keep. This is so only to a certain extent; for if you had 1,000 colonies and they were all weak in bees so they would give you no surplus, they would not be worth as much as one good strong colony, that would give you two or three hundred pounds of honey."

Many hives and appliances have been introduced to prevent the loss of swarms, but, so far as I know, none have been entirely satisfactory. This plan of Mr. Alexander's is very simple. No outlay is required for additional appliances, and, I feel sure, will in most cases do away with the swarming impulse; at the same time, we can double the number of our colonies and increase your harvest of honey. Of course, this should not be attempted until the old colony is strong in bees and there is a fair amount of brood in the combs.

Many of your readers may not have the opportunity of seeing *Gleanings*, and it is that such may have the means of trying this system that I have made a condensed extract of the essential portions, so as to enable those who have the desire to put it in practice.—JOHN M. HOOKER, Philadelphia, May 10.

FOUL BROOD AND THE BEE-RACE.

[5891.] The question raised by Mr. W. J. Farmer (5875, page 177), "Why has not Foul Brood extinguished the Bee-race?" is very pertinent, and, personally, I should like to see this thoroughly discussed in the pages of the B.B.J., because I think that in attempting to answer it we shall probably upset some of the theories on foul brood.

In the article No. 5879, page 184, "W. J. F." says:—"Our twentieth century, with all its progress, is merely in the stage of childhood," etc. I venture to say that we are not yet past the stage of the protoplasm as regards our material progress with the *Bacillus alvei*, and that the age we live in is artificial as regards almost everything. We speak of the McEvoy plan of curing foul brood—by starvation; the Leaflet No. 32 plan of cure (?)—by destruction; the disinfectant cures, but where is there a plan as efficacious as the taking up of stocks yearly by the sulphur pit as practised by our grandparents (which I do not advocate)? Nowhere! For we have simply split or divided ourselves into spores in our progress from the bacillus. My opinion is that the modern system of bee-keeping, as generally practised, with its old combs, queens, quilts, and the expert visits, is the means of propagating and spreading disease far more than the ancient straw skep system of swarms, new queens, and occasionally new hives or skeps.

This ancient system may be the reason why the bee-race has not been extinguished. Nor do I think that foul brood is on the decrease, or will decrease, until the law interferes, or an unheard-of system arrives which will arrest the progress of this scourge. If either of these are not within measurable distance, the time will surely arrive when bees in England will be kept with great difficulty, for now already whole villages, one after another, are stricken with the disease. That time is hastened by the increase of population, the sale of diseased bees and appliances, experts' visits, and bad honey-seasons.

It will be admitted that the number of bee-keepers show a large increase yearly, and that there are very few villages in England that cannot boast of a bee-hive. In the struggle for existence the fittest will survive—viz., foul brood, since it is

almost indestructible and increases at a prodigious rate. On the other hand, the natural life of the bee is compassed within the space of six weeks, and this ensures its self-destruction in that time. If Mr. Loveday admits the above, his argument in effect is that the bee-race is doomed! —T. W. SWABEY, Lincoln, May 15.

BEES AND PHILOSOPHY.

[5892.] I must ask to be allowed to protest against the unwarranted remarks of your correspondent "Dom Maurus" (5887, page 196), who apparently holds the belief that his own views are absolutely correct, and that the B.B.J. is spoiled by anything inserted to the contrary.

For my part, I seek the absolute truth, whether in bee-knowledge or otherwise, and I read with the most careful and tolerant attitude even those articles in which I am strongly opposed. I am glad that the B.B.J. admits even the ideas of "Dom Maurus," for a journal of the kind would not be well conducted if it only admitted sectional views.

In these days of general freedom, "Dom Maurus"—who would like all views suppressed but his own—must be often sadly troubled to find himself contradicted, and if he wishes to escape from the ideas that vex him he must confine his reading to the dictionary and even there he will find "contradiction."

I have written articles for the general Press, and I edit a small paper myself, but have never in my life resented hostile criticism—I welcome it; but I do most strongly object to the idea that either my views or those of other people, good or bad, should be suppressed. If any cause fears criticism it is a plain confession of error on its part, for the truth fears no foe whatever.

The man who does not study in as many directions as he is able will not have correct views, and it is unwise for any man to pin his faith to any one teacher. Science demands facts, not beliefs. Science means exact knowledge, nothing more nor less. I plead for an experimental apiary in order that we may obtain that exact knowledge. I see nothing foolish in that, nor can I see that it is impossible to get such an apiary, though it may be difficult, and I see nothing impossible in the way of breeding a foul-proof race of bees.

The word impossible is not used by those who know how many "impossible" things have already been accomplished. I am not objecting to the editorial remark that the Government is difficult to move. I know that the statement is correct, but we need not abandon hope.

I think foul-brood legislation is premature until after more exhaustive research has been made, and I positively cannot see that foul brood will be wiped out while bees remain liable to it, and the germ remains indestructible. We must either find means to destroy the germ, or else of making bees immune.

I am not ashamed of my views, and in proof thereof, beg to sign my full name and address for publication.—W. J. FARMER, 17, South Trefusis Road, Redruth.

[We have not deleted many lines from either of the two preceding letters, though they both clearly travel somewhat wide of our mission as a journal devoted exclusively to the subject of bee-keeping. But, having gone so far, we must ask our correspondents to bear in mind the fact that discussion on theological questions is a subject we cannot devote space to. We therefore hope all our good friends will remember this when favouring us with their contributions. Our paper should know no "ism" but bee journalism, nor any politics but bee politics, and even within these narrow limits we unfortunately get enough and to spare of acrimonious contention, very trying at times, as our readers well know.—EDS.]

NOTES FROM NEWMARKET.

WHY HAS FOUL BROOD NOT EXTINGUISHED BEES?

[5893.] Mr. Farmer asks this question on p. 177, and on p. 183 Mr. Loveday essays an answer thereto. But, in my opinion, his shaft goes very wide of the mark.

Long, long before

> "Sad Aristæus from fair Tempe fled,
> His bees by famine and diseases dead,"

foul brood must have been a scourge to the Pelasgian bee-keeper, and were there any substratum of fact in Mr. Loveday's theory, the bee-race must have become extinct long before man became aware of the bacterial origin of diseases and the methods of combating them. The race has survived, not by the agency of human over-lordship, nor by the isolation of intervening Saharas, but simply by the operation of the law of Nature known as the "survival of the fittest." The fight between *Bacillus alvei* and the bee is a fight between two vital organisms, the survival of the one involving the extinction of the other—and here, as everywhere, it is the stronger that prevails. Hence it is that we must look to the maintenance and increase of the vigour of the race by means of judicious and scientific breeding, and, at the same time, cultivating those disease-resisting qualities innate in the bee as in every other living creature; this is one of our greatest safeguards against foul brood.—CHARLES H. BOCOCK, Ashley Apiaries, May 20.

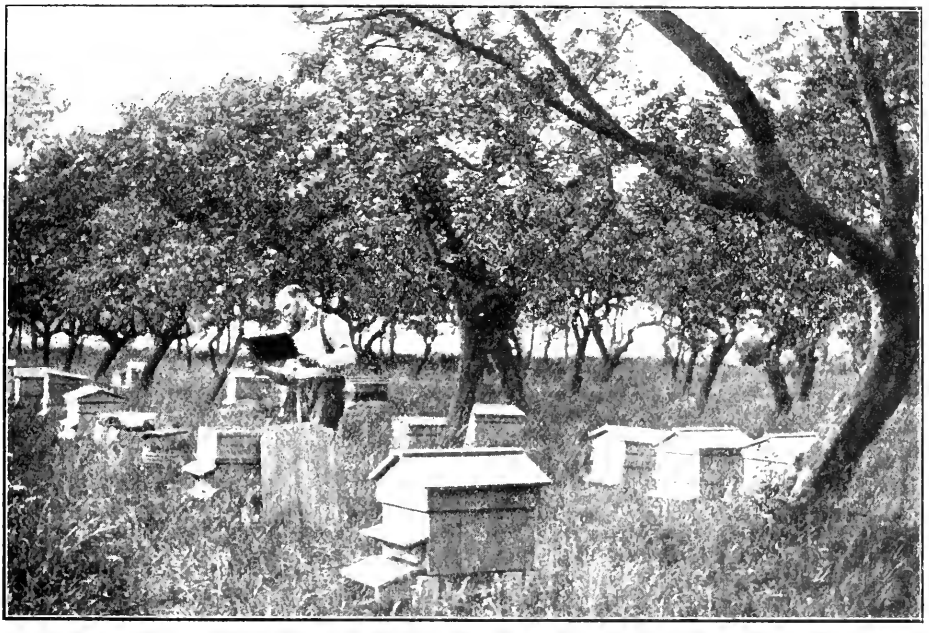
(*Correspondence continued on page* 206.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Since the following notes were written descriptive of our friend Mr. Hood's out-apiary at Pickering, he sends a line to say he has disposed of the apiary shown, and made arrangements for removal of his residence to Whitby, Yorks, where he will be in a better position for the bee and honey-trade on a larger scale than before. All this only tends to show that he has not yet reached the end of his success as a bee-man, and we wish good luck may attend his enterprise. He says:

"In sending a few notes as requested, I cannot begin as many do by telling how their first start in bee-keeping was made, for I am unable to remember my earliest experience. I believe, however, that the first investment my parents made on coming to Pickering, newly married, in 1844, was in the purchase of some hives of bees. I need hardly say that they were straw ones. All my experiences, therefore, up to 1884 were with skep hives. When a Mr. Wheater took up his residence in our town, and brought with him several wooden hives stocked with bees, he and I soon became great friends; and, in return for the willing help I gave him with the bees and hive-making, he taught me all about the working and value of the frame-hive. Those hives held frames 14 in. by 7 in., with a 15 in. top-bar. They still remain popular with many bee-keepers about here. I myself, however, use the standard frame only, and as I send so many colonies all over the country, I still keep a few straw skeps for producing swarms. We took all condemned bees in those days by fumigating with fungus or puff-ball. Once I began working the frame-hive I began to take the B.B.J., and from it soon learned the 'better way,' for I started bee-driving in saving condemned lots, then began queen-raising and all the rest of it. It soon became known that I would remove bees from condemned skeps with no bother to the owner or flavour of sulphur to the honey. But the great difficulty for the skeppist bee-keepers here was that the honey could not be sold. This difficulty was soon removed by the influence of the B.B.J., and now a greater one has arisen in its place, viz., where to find enough heather honey to fill orders. This one still remains, but, from a business point of view, you will admit it is pleasanter to bear than the former one.



MR. THOS. HOOD'S OUT-APIARY, PICKERING, YORKSHIRE.

"The hives shown in photo are located in my out-apiary. They stand in an orchard close to an old brickyard, with several acres of willow-catkins in close proximity. They are taken down in March and left until the heather is getting well in bloom. It is a splendid place for clover honey. That gathered in the town is always mixed, but of good quality, when clear of honey-dew. I work on the non-swarming system at

home, as I find stocks so managed do best on the moors. I have only had two swarms from the home apiary since I commenced with frame-hives, and those were from hives which had been blown over, and had, in consequence, to be well nursed and kept short of room.

"The only time I have had foul brood among my stock was in one headed by an imported foreign queen. It has certainly appeared several times in bought stocks, but once sure of the case I always stamp it out by burying everything as it stands. This, and always taking every hive with combs over two years old, and making my number up thirty spring count (with bought stock and driven bees), I believe to be the reason that I have never had any trouble with it. Whenever I come across it when working for other bee-keepers, if I cannot get permission to destroy the lot, I buy the stock and destroy it myself. I find it very easy to detect the disease in all stages from long experience."

CORRESPONDENCE.

(*Continued from page* 204.)

A HARD CASE.

LOSS OF BEES THROUGH OBSTINATE NEIGHBOUR.

[5894.] I have just heard from one of our members that he has lost twenty-three stocks of bees out of a total of twenty-eight from foul brood contracted from a few neglected hives located near his apiary. He has offered to help the owner in stamping out the disease, without fee or reward, in every way possible, but all to no purpose; the owner will neither accept help nor do anything himself. I should, therefore, like to know whether, under such circumstances, our member could sue such a so-called "bee-keeper" for wilful damage to our friend's property. I send name, etc., for reference, and sign—COUNTY SECRETARY, May 18.

[Notwithstanding the obvious wrong-doing that such a case brings to light, we fear there would be legal difficulties in bringing it home to the offending neighbour. We have among our readers many legal gentlemen who are ardent bee-keepers, and perhaps some one of these will kindly offer a word of advice with regard to taking the case before a county court judge. If so, we will be extremely obliged.—EDS.]

MORE SWARMING. BEES DOING WELL.

[5895.] Several people about here have had swarms during this last week; but it has been very cloudy, with N.E. winds since Friday. I have now some bees working nicely in shallow-frames. I looked in one of my hives the other day and found a splendidly-shaped queen, but its wings were badly torn, so that if I let the stock swarm, I suppose the queen would fall to the ground when leaving with the swarm, and become lost, which would be a great pity. She is such a prolific queen, so I shall do all I can to prevent the stock from swarming. I often think that queens are frequently lost in early spring when leaving their hives by falling to the ground through having torn or imperfect wings.

I shall be very pleased if you will tell me what variety the enclosed bees belong to.—W. A., Oundle, May 22.

[Bees sent are the common brown kind slightly crossed with Carniolan blood.—EDS.]

LONGEVITY OF BEES.

[5896.] On September 5 last year, I introduced a fertilised Italian queen to a stock of English bees. On looking through the hive yesterday (May 19), I still find about twenty-five to thirty black bees left alive; nearly nine months after. Surely this is an extraordinary length of time for autumn-bred bees to live, and I should like to hear other bee-friends' experiences on this interesting subject.—A. H. W., Four Oaks, May 20.

Queries and Replies.

[3749.] *Bees in Cold Situations.*—Can you help this inquiry in your paper? I have a good knowledge of bees, but cannot make them a success here. There is an excellent garden, and they are in the most sheltered position, and yet always come out weak in spring, though sent into winter quarters snugly packed, and with plenty of food and numbers. We are 600 feet up, and the winter is cold, particularly the March winds. My bees dwindle sadly, and have to be united, and some quite succumb. Is it too cold to expect the best results here? Then I put candy over feed-hole, but do not feed with syrup until April because of opening the hives and doing more harm than good. If they have plenty of food I leave the syrup-feeding until reasonably warm. Can you suggest any remedy? I have had no disease, keep queens young, and leave them stronger in autumn. —FORESTER, May 10.

REPLY.—We cannot think that situation alone is the cause of your non-success. Bees are known to do well in the far Highlands of Scotland, and in exposed positions elsewhere. We fear that bee-forage is not plentiful in your locality, and it is of no

use to expect any appreciable harvest from your own garden, however large and good. If we were given some idea of what plants grow in the district it might help us in advising you, but without this we cannot render help.

[3750.] *Aroma and Consistency of Early Honey.*—I should be very grateful if you will answer me the following:—I have three hives of bees, which may be classed as strong, medium, and weak. I examined them on May 7, and found they had a very unpleasant smell. I cannot find any traces at all of foul brood; but on shaking one of the combs containing honey, but no brood in cells, the contents fell out like water. It seemed rather too thin for honey. Can you tell me what the cause of this is, and how to remedy it?—J. Such, Kent, May 9.

Reply.—There need be no alarm felt either at the peculiar smell or the watery condition of the honey. Some of the earlier bee-forage gives out a very peculiar smell at hive entrances, notably that from black-currant blossom. It is also well known that some honies are very thin when just gathered, and will fall from the cells if frames are held with flat surface downward.

[3751.] *Queens Raised from Eggs of Fertile Worker.*—Will you kindly let me know in B.B.J. whether a queen raised from the egg of a fertile worker could, if fertilised, produce worker eggs? I am asking this question because early last year I noticed that one of my stocks was not breeding. On examining it again a week later, I noticed a few eggs scattered about the centre frame, and, as I was unable to find any queen in the hive, these eggs must, of course, have been laid by a worker. I at once sent for a queen, which arrived safely and was introduced the same evening; but the next morning I was surprised to find that the bees had thrown her out. Not only so, but on examining the stock I found that they had built queen-cells over the few eggs in the comb (five or six); in due course a queen emerged, and after about eight days started laying, but only in drone-cells. As the stock was rapidly dwindling I destroyed it; but what I would like to know is, if there had been any drones about would this queen have produced worker-eggs if fertilised? — F. P., Guernsey, May 16.

Reply.—Without being able to account for the appearance of a queen under the circumstances stated, you may take it from us that a queen-bee cannot be raised from an egg laid by a fertile worker.

[3752.] *Distance between Hives.—Dead Bees Cast Out.*—Kindly reply in the B.B.J. to the following:—1. I have seven hives, four of the "W. B. C." pattern, and three Neighbour's "Sandringham." The hives are all in a straight line and the space between each is 33 in. Is this too little? I have had great difficulty in getting as much space between the hives as this, but a friend tells me they are too close to work properly. The fronts of all hives are painted a distinct colour—red, blue, brown, sparrow-egg, terra-cotta, white, slate. 2. I cannot account for the large quantities of dead bees on the ground just outside No. 2 hive. This is the second time within three weeks that I have found numbers of dead bees as above. When I examined the hive a week ago, and put a super on, it seemed a very full colony, and none of the other stocks have lost anything like such a quantity of bees, although a good many were outside No. 3 hive.—Ada K. S., Weymouth, May 15.

P.S.—I enclose subscription to your most excellent journal for another year.

Reply.—1. It is better to have at least two yards between each hive, if at all convenient, because of risk to queens in mistaking their hive on returning from the marital trip. The precautions taken in colouring the hive fronts will, however, reduce the risk to a minimum. 2. The dead bees cast out will be a result of their being cut off from the cluster during winter, and consequent starvation through inability to reach the food. There need be no great alarm felt, as the colony is now strong, and will soon recoup the loss of bees.

[3753.] *Transferring Bees.* — Will you kindly answer following in B.B.J.? On April 12 I placed a skep of bees over frame-hive as directed in "Guide Book" (page 140), and on removing the skep a few days ago to see if the bees had started drawing out foundation in lower hive, and was much surprised to find they had not touched it. The skep was crowded with bees, and combs full of brood. Will they transfer themselves all right, or would it be better to drive them? How long should I leave skep before removing it? I send name, etc., and sign —Anxious One, Wokingham, May 15.

Reply.—Beyond asking if you have taken steps to make the lower hive as warm as possible, by covering well with cosy wrappings, we cannot say why the bees have not taken possession of lower hive. However, they will do so all in good time, and we advise leaving them in preference to driving. We suppose there is no excluder between the two hives?

[3754.] *Hiving Bees on Old Combs.*—I am sending a piece of comb, and ask if you will examine same, and say if it is infected with foul brood. I may say the sample

was cut from a hive the bees of which died out, leaving a lot of sealed stores behind them. The bees which have now died were a swarm of last year, hived on combs left behind by a stock that died out in the same way. My friend used to keep twenty to thirty colonies of bees, but he now has only one left. A reply in B.B.J. will oblige — A REGULAR READER, Boston, Lincs., May 15.

REPLY.—The cell-cappings of old comb bear all the appearance of having come from a stock badly affected with foul brood; but there is not the smallest trace of any diseased larvæ left in the cells. The fact of your friend losing so many stocks is easily accounted for if his plan has been to hive swarms on combs containing stores left behind by bees that have died out as stated. Surely he will have now learned that it is fatal carelessness to act as stated, and take ordinary care in future. It is in the highest degree regrettable to read of such cases as the above.

[3755.] *Making the "W.B.C." Hive.*—I am a beginner in bee-keeping, and a joiner by trade, and want to be able to make the "W.B.C." hive, and this I can do if I have the inside measurements of brood chamber, from front to back and side to side. Also, how much less do you make the standard frames than the brood chambers? I have bought the "Practical Note-book" lately, but it gives no particulars with regard to size of the standard frame, nor does it say how much less they are made than the brood-chamber, or how far the standard frames are kept apart. A reply in B.B.J. will oblige.—A. W. G., Plumstead, May 17.

REPLY.—The "Practical Note-book" is not in any way intended as a guide to bee-keeping, hence the omission of reference therein to size of the "Standard" frame. We may, therefore, say at once, that the frame in question is 14 in. by 8½ in. outside measure. On the other hand, the inside measurements of brood-chamber (or body-box), which you cannot find in "Note-book," is plainly given therein twice over, first on page 57 and again on page 60. Bearing these measurements in mind, it will be found that there is a quarter-inch space between side-bars of frame and sides of body-box, and half-inch between bottom-bar and floorboard of hive. All these particulars and a great deal more information, which all bee-keepers need in order to be successful, will be found in the "Guide Book," without which—or some other good work on the subject—no beginner can hope to succeed.

[3756.] *Early Swarms Doing Well.* — I had a swarm at 10.30 on the 17th, and got them safely hived. Next morning I examined them and found five frames were thickly covered with bees, no space whatever being left. There was also a number on one side of another frame. I should like to know: 1. Whether I ought to confine these bees to the five frames, or leave the six as they are. Also you might say whether this is a fair or average swarm. I only started bee-keeping last season, and have derived much benefit from the B.B.J. 2. Is there a branch in Kent of the Bee-keepers' Association?—H. B., Plumstead, May 18.

REPLY.—1. It is a full-sized swarm for so late a season as the present one; and, assuming that the frames given are fitted with full sheets of foundation, we should leave the bees all six frames they now occupy for a week, then add a seventh frame before giving them a surplus-chamber. 2. The Kent Bee-keepers' Association is about to be reorganised and started again shortly, when the address of hon. secretary will be published.

[3757.] *Re-queening Stocks.*—I should be obliged for your opinion on the following points:—A friend of mine started last year with a swarm purchased from me, and we have been sharing what little knowledge I possess. On inspecting my friend's hive to-day, I find the stock to be queenless, whereas a month ago she was laying vigorously. I have a small stock which I could well spare, and so I ask:—1. Would it be advisable to unite the two lots, or, preferably, to take a comb of brood and queen-cell and place in my friend's hive? I may say the two lots are about half a mile distant one from the other. 2. I should like to join the county bee-keepers' association. Should I be eligible for Surrey? I ask this because, though resident in Middlesex, only the River Thames separates the two counties here. To whom should I apply? In your issue of the 18th I see mention of early swarms, but none of sections being removed. I took off my first finished section this season on the 18th inst. Thanking you in anticipation of a reply through B.B.J., I send name, etc., and sign—A NEW READER, Kingston-on Thames, May 21.

REPLY.—1. If you have a frame of brood available with ripe queen-cell thereon, we should prefer adopting that plan rather than uniting under the circumstances. 2. You could join the Surrey B.K.A., which recently held its annual meeting at Kingston-on-Thames. Apply to Mr. F. B. White, hon. secretary, Marden House, Redhill.

Echoes from the Hives.

Helsby, Cheshire, May 17. — Glorious weather now prevails, and the merry hum of the bees is heard all day in the vicinity

of apple and sycamore trees. Stocks have expanded rapidly lately, and many queens are now occupying nine frames, and in several hives I have noticed queen-cells in which eggs have been deposited. Pollen in large quantities is much less noticeable than last year. Supers are now being given in this district to provide storage-room for colonies having go-ahead queens. Honey now being stored is dark and thin, and should be extracted just before the clover yield. The hawthorn is now bursting into bloom everywhere, and I earnestly advise bee-keepers generally to try and get honey from this source, and, if pure, they will be delighted with it.—JAS. WADDELL, Expert (on tour in Cheshire).

Tring, May 23.—Cold north and north east winds, bright sunshine in middle of day, but very cold and frosty nights. Hives examined to-day and found to be packed with brood in all stages. Bees working well on chestnut, apple blossom, and dandelions. Every prospect for good honey season around this part; drones flying freely, and one brother bee-keeper reports he has already had three swarms from stocks in straw skeps.—F. J. T.

Broomfield, Chelmsford, May 22.—I had a nice swarm from one of my hives on Friday, the 19th, and after being hived all right the bees are doing well.—C. C.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 8 to 12, at Bournemouth, Hants.—Show of Honey, Hives, etc., in connection with Royal Counties Agricultural Society's Show. For schedules apply E. H. Bellairs, Christchurch, Hants. **Entries close June 3.**

June 14 and 15, at Southend-on-Sea.—Annual Show of the Essex Agricultural Society. Bee and Honey Section under the management of the Essex and Suffolk Beekeepers' Association. Classes open to the United Kingdom. Schedules from Mr. G. R. Alder, Rawreth, Essex. **Entries close May 31.**

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 29, at ordinary fees.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon, Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 13.**

July 19, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1 lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 12.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Beekeepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Fen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entry to members. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts.

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame Hive. Bee demonstrations and numerous other attractions Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1 lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1 lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford **Entries close August 23.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** *More Early Swarms.*—We thank several correspondents for notifying early swarms in the south, and one—the latest—is from "A Twenty Years' Reader of B.B.J.," who sends word of a swarm at Gatehouse, Kirkcudbrightshire, N.B. on May 17.

NOVICE (Middlesex). — Pinner as a Bee District.—1. We are not sufficiently acquainted with your neighbourhood to say how bees would get on there, so far as regards yielding surplus. Perhaps some reader who knows the place will kindly help you by sending a line of reply. 2. The hon. secretary of the Middlesex B.K.A. is Major Fair, Anlaby Road, Teddington.

D. C. (Hertford).—Bee Nomenclature.—Bees sent are Ligurian hybrids.

W. L. (Coventry).—1. Bees sent are the ordinary brown variety of this country. 2. The immature larva cast out is no indication of disease in hive it came from, which latter must be very strong indeed to cover fifteen frames at present time.

J. F. J. W. (Edgbaston).—Honey sent is probably imported from Jamaica, the semi-granulated condition of sample being characteristic of the honey imported from that place in barrels to this country.

Suspected Combs.

W. T (Suffolk).—Foul brood is rapidly developing in comb, but it seems quite a recent outbreak.

H. C. (Woking).—Sample of comb is badly diseased, and, as stock is also queenless, you should promptly burn the lot!

A. L. S. (Birmingham).—Comb is all right and perfectly healthy. It contains only pollen and food.

J. B. C. (Cornwall).—Foul brood is developing rapidly in combs.

T. S. (Carlisle).—Comb sent is perfectly healthy; contains only honey and pollen.

P. (Warminster). —1. Comb is affected with foul brood. 2. If bees are worth saving, you might unite them to the weak lot after starving for the time named. We should not use the queen of diseased lot on any account. 3. Dipping hives in boiling water would not have the smallest effect on the spores of foul brood.

G. E. F. (Colchester).—Comb shows foul brood in the incipient stage; evidently a recent outbreak.

G. G. (Stapleton, Bristol).—Comb sent is badly affected with foul brood of old standing. You should see at once to state of the strong stock standing close to the one that has died out.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

WANTED, strong SWARMS, in exchange for good English lever, or sell 25s.; silver lever (by Booth, Sheffield), sell 25s.; or "gold filled" hunter, sell 22s. 6d.—H. GORDON GOW, Chipping Norton. H 78

FOR SALE, TWO strong STOCKS BEES, on ten Frames, Standard Hives, with super fitted, 30s. each.—REV. JARVIS, Coleford, Glos. H 77

EXCELLENT 1904 QUEENS, by return of post, 5s.—THE APIARY, 8, Grange Street, St. Albans. H 76

HEALTHY SWARMS, 10s. 6d. The best selection of 40 stocks, collected three years ago. Inspection of my 50 stocks invited on Saturdays. Deposit. Correspond also in French, German, and Danish.—P. HANSEN, Gardener and Bee Expert, 3, Gladstone Cottages, Norwood Green, Southall, Middlesex. H 75

28LB. HONEY TINS. A few dozen, at 9s. per dozen, in crates. All new.—W. SHEPHERD, 34, Hugh Oldham Drive, Manchester. H 74

DOUBLE-WALLED HIVE, 7s. 6d. "W.B.C." Racks (without sections), 2s. each.—ILLINGWORTH, Acton. H 73

29TH YEAR. Reliable Young Queens, 5s., post free, in introducing cage.—ALSFORD, Expert, Haydon, Sherborne.

FOR SALE, strong STOCKS of BEES, crowded on eight Standard Frames, 1904 Queens. Guaranteed healthy. Free on rail; £1 each.—JOS. ROWLAND, The Cliff, Holbrooke, Derby. H 60

EXCHANGE English Game Cock for two second-hand Standard Hives.—PRUDEN, Filgrave, Newport Pagnell, Bucks. H 72

SWARMS (Natural), 2s. 6d. lb. Boxes returnable.—F. W. PALMER, Tamar Apiary, St. Budeaux, Devonport. H 71

WANTED, JUNE SWARMS. State lowest price.—J. FORSTER, Glen Hotel, Colby, Isle of Man. H 70

FOR SALE, owing to business pressure, SEVEN STOCKS of BEES, on Standard Frames; good hives, section racks, shallow frame supers, feeders, extractor, etc.; equal to new. Purchaser to remove.—PUTTOCK, 135, Shooter's Hill Road, Blackheath, S.E. H 69

STRONG, Healthy Natural SWARMS, 12s. 6d. Skeps free. Guaranteed safe arrival.—CADMAN, Codsall Wood. H 68

SWARMS FOR SALE, 2s. per lb. Free on rail. Boxes returnable. — H. GOODSELL, Biddenden, Cranbrook. H 67

PRIME NATURAL SWARMS soon ready. All from first-class Bar Frame colonies. Sent in Abbott's Swarm Boxes. Price 12s. 6d. and 15s. each.—PERCY WILKINS, Bee Farm, Wantage. H 66

"LITTLE WONDER" HONEY EXTRACTOR. New. Exchange for Swarm.—21, Woodfield Crescent, Ealing. H 65

Editorial, Notices, &c.

THE WEATHER.

The tremendous downpour of rain on Tuesday, May 30, should prove a veritable godsend to farmers located within the area over which it extended, and in almost equal degree to bee-keepers. It was truly a "laving of the thirsty land," and would do an immense amount of good to vegetation of all kinds. The downfall was quite torrential in our part of London while the thunderstorm lasted; indeed, for a time the B.B.J. office seemed in great danger of being flooded out.

But the brightening up of trees and flowers, and the coolness of the air after the oppressive heat of the last few days, were delightful, and betoken busy times for bee-keepers. If the bees can be induced to work in surplus-chambers instead of preparing to swarm, all will be well, and we shall expect to hear of full supers, which means good fortune to the early shows, now close at hand.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5897.] The drought still continues; a whole month has passed and we, in this neighbourhood, have not had enough rain to lay the dust, not only so, but during most of the time we have had harsh winds from N. and N.E., so that we are very much in need of a change. Vegetation is not making that luxurious growth we expect, and generally get during the month of May, the grass everywhere is short and stunted, so that the farmers' prospects of a hay crop are growing less as the weeks pass by, and a light hay crop naturally betokens a short honey crop. The bees have, however, made steady progress in keeping pace with the season, those few stocks which swarmed three to four weeks ago have in no single instance that I can hear of sent off a cast.

In my own apiaries we have had only two May swarms, although my stocks have received the best treatment at my disposal to keep them growing. I have many strong colonies which, no doubt, will give a good account of the season, provided the opportunity occurs. There are a few fields of sainfoin near by which promise to be our sheet-anchor this season, but the hop or trefoil is stunted in growth, and the flowers are small. I saw a few white clover blossoms for the first time to-day (29th) quite ten days earlier than usual.

The annals of leafy June will—if a bountiful rain comes—soon rouse a pæan of praise among us bee-keepers, and supers should now be got on all hives from which swarms are not wanted. Care should also be taken to see that the bees have room given just in advance of their requirements. Keep an eye on the bee-forage of your district, and note how the crops are coming on; then arrange your work accordingly. A few miles even makes a great difference in the forage, so that good advice for one village would not be useful in the next.

Always keep a constant supply of water near the bees; if I did not do this my bees would have to go half a mile to a farm-pond for water. It will thus be seen the thousands of miles I save my bees in having a watering place near the hives. They use up six or seven gallons daily (with evaporation) at my home apiary alone. At my out-apiary there is, fortunately, a large pond within a stone's throw of the hives, so water-troughs are not needed.

To those who are contemplating a start in bee-keeping I again say Begin with a natural swarm; do not risk the purchase of established stocks unless you can thoroughly overhaul and examine them to see that they are healthy. With a new swarm and a new hive a prospective bee-keeper starts well with every chance of success; and the large number of swarms advertised in our JOURNAL gives ample choice for selection from a wide range of country and district. In buying swarms by weight, the neighbour who comes for his swarm gets full weight, as there is no time passed on long railway journeys, but the purchaser at a distance can put himself on equal terms to the neighbour if he will, by giving the swarm a bottle of good syrup on arrival, at a cost of about twopence, as after a good feed the bees will be ready for the hive and its replenishing, even if 300 miles away.—W. WOODLEY, Beedon, Newbury.

BEES AND PHILOSOPHY.

THE CURE OF FOUL BROOD

[5898.] Just one final word to put myself right with you and your readers. First let me thank our Editor for inserting my reply to "Dom Maurus." He erred in inferring that my philosophy was materialistic; it is the very opposite, but in a paper

like the BEE JOURNAL, read perhaps by Christians, Jews, Turks, infidels, pagans, Buddhists, etc., I carefully refrained from teaching any special sectarian ideas. If "Dom Maurus" will read my remarks carefully he will see that I do no more than enunciate general principles, and that I simply express the truth, the undeniable truth, that there is an incomprehensible force at work in the world. I have said not a word against any man's special beliefs as regards the nature and attributes of that force. There I leave this question: it is too high for any human brain to understand.

The Cure of Foul Brood.—As regards the cure for foul brood I have no faith in any cure short of entire destruction of the spores by baking or boiling. So far as I know my bees are free of foul brood, and I get a good harvest of honey every year. My plan of securing this has already been given in the BEE JOURNAL; but some of your contributors severely censured me for advocating the annual renewal of brood-combs as being a wasteful procedure. Here is my plan again. At the end of this season I purpose removing every single brood-comb and to put the bees for three or four days in a temporary wooden hive till they have consumed all the honey in their sacs, feeding them on syrup medicated with Izal at the same time. In the meantime their old hives and quilts are baked or boiled, and after three or four days each lot is placed on sheets of foundation and fed up. This, of course, is not my own plan; I did not discover it, but I have adopted it with some modifications. I do this even if I believe the bees to be healthy, and it pays me. Old combs, even those a year or two old, are full of dirt, as proved when we extract the wax, apart altogether from the pollen and cell linings. I keep young queens, and have bought many from your advertisers. I feed the bees in spring, and when strong enough give them a shallow-body above to breed in. By July I have immense stocks, which pay well for all the care given, and return a profit in the worst years. If every hive in the kingdom were treated thus simultaneously *at the end of the season*, foul brood would be wiped out, and the procedure would not be needed for another three years.

I would not object greatly to making this compulsory, but I do object to having Government inspectors disturbing my hives during the breeding season. The proper time is at the end of the season, and in the manner stated. As regards store-combs, it is safest to destroy these too, where foul brood has existed, but the main thing is to have the brood-chambers right, as during the time the surplus-chambers are on, the bees that are bred are not required for the honey harvest, which is the main thing after all; and if they do get affected they can be again treated at the end of the season.

A thorough syringing with water is a good thing to get spores out of store-combs or anything else except a fibrous material, but too much reliance should not be placed on it alone. My own opinion is that Izal is the most easy disinfectant to use, where it is judged expedient to apply such. It mixes readily with water, whereas carbolic acid does not. It may be sprayed into empty combs and, if it does no good it will do no harm in the proper proportions. Any unnatural constituent in the air of a hive cannot be good for the bees, even if it does keep down foul brood to some extent.

If I err in any of my ideas I will be honestly grateful to the friend who makes it plain that I am in error.

The usual foul-brood preventives may be of some use; I do not know, but they certainly do not cure or eradicate the disease.

I have more faith in the common bee, the blacker the better, as a resister of foul brood than I have in the Italian. This, too, is not knowledge with me, but only a belief founded on the experience of others. I wish we could get exhaustive experiments either way.

I thank your correspondents who have helped to keep up the interest in my ideas *re* the real cause of foul brood. This question is the most important that we can discuss, and I have more faith in the special selection of bees for their foul-proof qualities than I have in any other system of eradication. But this can only be worked out in an isolated apiary, and by experimenters who are really scientific in their methods. It would never do for a commercial breeder of bees to keep foul-broody ones for experimental purposes, and such would be necessary in one apiary at least. Those finally selected as good disease resisters might be kept apart by themselves. Meanwhile, let everyone maintain an open mind on these questions. In a future contribution I hope to give fuller details showing how the annual or biennial entire cleansing of the apiary may be very expeditiously and easily done, and all germs destroyed.—W. J. FARMER, Redruth, May 27.

[We make no comment on above this week, but will probably refer to the subject in next issue.—EDS.]

BEES AND FOUL BROOD.

[5899.] My previous letter on this subject (5877, page 183) was founded upon my own observation, and referred not only to what may, but to what I have seen, happen. Mr. Bocock, in his letter (5893, page 204 last

week), goes wide of practical politics adapted to present-time requirements by one hundred years. Apparently it gives pleasure to some of your correspondents to shut their eyes to the fact that many bee-keepers are in immediate need of assistance in order to fight foul brood, and allow of their being able to keep bees at all, while they themselves, living in the bliss of hearsay knowledge only of foul brood and the serious consequences of a bad outbreak, formulate theories which it is more than doubtful will have taken practical shape for a hundred years to come. If an attempt is made to discuss this subject with these bee-keepers, they almost invariably say, "my interests in the pursuit are large. I have so many hives of bees," but the crux of the question is, "Have you had foul brood in your apiary?" Those who have not had practical experience in dealing with this disease in their own hives have a very limited knowledge of it, and the havoc it will work.

Of foul brood there are certainly two distinct types—one dry, the other with a great deal of moisture. Bees affected by the former may take two seasons to dwindle and die out, having got weak in numbers; but in this district we have the most virulent type of the disease, strong stocks in many cases being simply a mass of rotten brood, "foul" in the fullest sense of the term in a few days after becoming infected. Of my own experiences of the disease, I may say that we had none of it in this neighbourhood until a man removing from Wiltshire knowingly brought a diseased stock of bees with him to the main portion of our parish, one and a half miles from my apiary. This bee-keeper borrowed and lent appliances among bee-keepers in the village, and I am sorry to say that all last year I did not see a single healthy colony of bees in the village—Hatfield Broad Oak. The bee-keeper referred to gave me of his diseased hives to a skeppist, now eighty years of age, who had kept bees all his life, and the consequence was that the old man lost his bees. I was able to fight the disease with some success while it was not established nearer to my apiary, but it has spread from one apiary to another, and after curing the bees of one man for him, and then buying him out, he taking no interest in the bees, the nearest bee-keeper to me, only a few hundred yards away, got the disease in her hives. With this last all attempts to reason with her have been met by the reply, "I refuse to believe that bees are affected by any disease of this nature, and whether my bees live or die they will stand there, and no one will touch them." I have devoted twenty years to working up a good strain of bees, for which I had a demand that far exceeded the supply, but foul brood has robbed me, not only of the profits of bee-keeping, but of the pleasure that I have all my life had in it too. Am I and others to go on suffering to this extent through the carelessness of some, and opposition, founded upon theory, by others? The liberty of the subject is a cry often raised, but it is a false cry. We depend too much upon each other to allow it to be otherwise.—Wm. Loveday, Hatfield Heath, Harlow.

BEES IMMUNE FROM FOUL BROOD.

[5900.] I note with satisfaction that Mr. Farmer has raised the important question of rearing a race of bees capable of resisting foul brood, and I think he ought to be supported in this laudable endeavour; although there is unfortunately very little hope of such a scheme being realised as would have a general influence over the whole country. Queen-rearers may do wonders in this direction, yet there are many bee-keepers on a small scale in every district to whom the thought of buying such queens would never occur. It has been said (and it is probably true) that foul brood has been propagated by the introduction of foreign queens. But I think there is a much greater danger to the industry in the selling and buying of driven bees. For in a diseased stock many individual bees may be quite healthy, and therefore the queen has a good chance of being of this number, whilst a few diseased bees among many healthy ones would be enough to introduce the foe. As an illustration of this I may say that many years ago I was asked to drive some skeps. In one of them I found the queen with only about a hundred bees! I need not say that the brood in combs was entirely rotten. I took the queen, introduced her to one of my stocks (a thing which I would not do now) and watched carefully the result. The following year I showed the hive to our county expert, who declared it perfectly healthy, and ever since that time bees in this stock have continued so. I am, therefore, of opinion that the danger is far greater in the driven bees than in the alien queen itself, and so long as driven bees are to be had all over the whole country, there is little hope of mastering the disease. Some bee-keepers object to the use of honey in making artificial food as being dangerous, whilst others pretend that there is no necessity for destroying diseased combs. I think here would be the place to apply the proverb, *In medio stat virtus.* I strongly believe that honey which has been boiled up to 260 or 280 degrees Fahrenheit (as in the making of candy) cannot be a

vehicle for the propagation of foul brood. But I can hardly agree with those who hold that combs containing spores of foul brood and stores could be disinfected so as not to be dangerous to the bees. I am hoping much from the "Claustral hive," recently described in your pages. With it there seems to be no difficulty in stopping robbing when one has careless neighbours, and in obliging the bees to feed only on the medicated food you give them.

May I be allowed to say to the numerous bee-keepers who have written me asking for my candy recipe and others, to have patience till I get a little time? I hope to be able to publish them in the B.B.J. at the end of the honey season.—Br. Colomban, Buckfast, Devon, May 27.

HOW TO INCREASE STOCKS

WHILE CONTROLLING SWARMING.

[5901.] On May 9 I swarmed a stock by the method referred to by Mr. John M. Hooker in your last issue. On the 18th I removed the old stock to a new stand, and, unfortunately, not having either a queen or a queen cell in any of my stocks, I had to give it a frame of brood. On May 26 there were five capped queen cells on the combs, and bees were flying very strong. The swarm on the old stand had, on May 19, eggs, larvæ, and a few capped cells, showing that the queen had soon got to work laying, and on the 26th inst. I had to remove two frames of honey and pollen, replacing with frames of drawn-out comb, to give the queen more space; at the same time I put on a rack of sections. To my inexperienced mind this method of swarming seems very simple, and I shall consider it successful if it prevents casts, and the necessity of staying at home waiting for swarms to come off. If this experiment succeeds I shall hope next year to start rearing drones in April, and having early nuclei, so that the parent stock may build up quickly

I take this opportunity of thanking your correspondent D. V., who wrote in B.B.J. of April 20 (5865, page 158), for his method of cleaning "pollen-clogged combs." We have here great quantities of early blooming willows, and pollen comes in in superabundance.—J. W. L., Keswick, May 29

P.S.—On page 358 of *Gleanings* for April 1 there is described "The Sibbald Method of Swarming." If it be fine to-morrow I mean to try it. I think it would interest your readers. If you know of any body who has tried it I should esteem it a favour if you would give me his address, that we could compare notes.

[We cannot name any one who has tried the plan, but this may meet the eye of some one who can say something about it. If so, we will be glad to hear.—Eds.]

LONGEVITY OF BEES.

[5902.] Young bees flying for the first time, and playing about before the hives, easily become mixed by the wind, and are readily accepted by the bees of hives other than their own. I have found that this frequently happens even where hives are ten or more yards apart, and have now a case where there are young Italian bees on the combs of a pure black English stock standing twenty yards away from the nearest Italians.

The above is, I think, the most likely explanation of the case mentioned by "A. H. W." in this week's Journal (page 206). Your correspondent does not say what the twenty or thirty bees look like, though this should have been a very important point to consider before crediting them with a life of nine months. A bee nine months old would be very ancient-looking, very shiny, and all tattered and torn.—A. W., Sutton Coldfield, May 26.

BEES IN COLD SITUATIONS.

[5903.] Referring to the letter of "Forester" in last week's B.B.J. (page 206), I may say my hives are in a small paddock close to the town of Brecon, and situated over 600 feet above sea-level. At first I lost my stocks in much the same way as "Forester," but last season I very carefully studied the "Guide Book," and left about 30 lbs. of sealed stores in the hives for winter, having started rapid feeding with some drawn-out foundation in frames. In October I examined the hive, uncapped some of the comb, and packed up for the winter with, first, American cloth, three or four felt quilts and a piece of carpet, ramming felt and a bag of cork sawdust between division board at end. In January, choosing a fine day, the hives were opened, empty combs removed to the back, and the back ones, which were full, partly uncapped and moved more to the centre, a couple of cakes of candy were given on top, a proper shaped hole being cut in the cloth so that it all laid flat on the frames. I fold the felting so that it all lies flat round the candy, then cover the whole lot with felt and carpet. Early in April I opened the hive again; the empty sections where the candy was were filled with sealed honey-comb, and work was commencing in earnest. I removed these, uncapped some comb, and fed the bees gently, adding a frame or two

(*Continued on page* 216.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

In response to our request, Mr. Knewstubb, who is seen in his bee-garden illustrated below, sends the following notes of his bee-experiences. He says:—

"I cannot claim to be the pioneer of our household in the art of bee-keeping; the palm in this particular case must be given to my elder brother, to whose perseverance and interest in the craft the apiary shown in the accompanying photo is a standing testimony. Although for some nine years now he has been out of touch with the bees, I am still able to draw upon his experience in time of need.

"As will be guessed, the hives (numbering about twenty-five) are all on the movable frame system, but an examination of our storage-room would reveal the old, old story of evolution from the straw-skep to the modern frame-hive, and I can just recall the time when the original straw-skep was re-instated in its old place to adorn the garden—at least, that was the purpose my father declared it was brought out for, but he doesn't say so now.

"Although always taking good care to keep at arm's length myself, I remember very well the tortures that my brother had to endure in the form of stings until a better knowledge of bee management and the introduction of the frame hive brought about an improved state of things.

"The hives, along with the bee-house in the background, are all home-made, and the hives will, I think, compare favourably with those from well-known manufacturers costing well on for £1 each and over. No bees are kept in the house, which is used solely for manipulating and storage purposes. The hives are worked mainly for extracted honey; we find that the best results are obtained in this way, taking into account the minimised risk of conveyance, and the comparative ease with which honey in bulk can be produced and dealt with.

"The figures seen in the centre are my two sisters, the one to the left being my chief helper in the work; the other one is away from home most of the year and consequently cannot take part in the many duties that can always be found for feminine hands in the apiary.

MR. A. KNEWSTUBB'S APIARY, LONG MARTON, CUMBERLAND.

"For myself it cannot be said that I took to bee-keeping simply for love of the cause. I'm afraid it was more for the sake of the 'grist' that the produce of the bees' labour would bring to the mill than for any interest I had in them as a hobby. Nevertheless, I find a good deal of pleasure in working amongst the little labourers, even though much of it has to be done after working hours; while with regard to the £ s. d. I have never yet found the balance on the wrong side, and sometimes they have left a substantial sum to the good.

"As regards the past season of 1904, however, I am sorry to say it was a some-

what unfortunate one for us. Not only has the quantity of honey been limited, but the quality has fallen far short of that gathered during 1903. However, as the old adage has it, 'Hope springs eternal in the human breast,' and we are hoping for better things in 1905."

(*"Bees in Cold Situations," continued from page 214.*)

every week, till by the end of April I had from eight to ten frames covered with bees. In May I put on a rack of sections (21), and to-day (May 29) seeing that nearly all the sections are filled and sealed over, I have dropped in another big frame, and put on another rack of sections under the one filled. My other hives are nearly all in a more or less forward condition, and I attribute this entirely to opening in mid-winter and moving the empty combs to the back on taking them out, as previous to doing this I found my stocks dwindled and starved, with plenty of food so near and yet so far. I do not know whether it is a record to secure a rack of sections before the end of May, but here no one has yet put on supers.—W. B., Brecon, S. Wales.

RYMER'S NON-SWARMING SYSTEM.

[5904.] The thanks of bee-men in heather districts are due to Mr. Hooker for his article in last week's issue (5890, page 202).

The drawback to Mr. Rymer's system of working with me has been the superseding of queens by the bees, owing to the queens not taking to the extra set of combs, but here I see the benefit to be derived from Mr. Hooker's article. Put your queen and frame on which you find her along with eight frames fitted with foundation or drawn-out combs on the stand occupied by the stock, lay your queen excluder on, and put the nine frames of the original ten-frame stock on the top of all, and then you know which part of the hive the queen is in, and as the brood hatches out of the top lot the bees will store them with any honey that is coming in, and no doubt sections placed on top of them. But what about the drones in the top lot? How would it do to cover the seven middle frames with your queen excluder, and so leave room at either end for drones to pass down and out of the hive? Would the queen find her way into the top through these two openings? Again, many would object to cut the excluders to allow this, but if it did not matter about the drones being confined I think the arrangement as stated above would go a long way towards accomplishing the end of preventing swarming. If the system worked out all right, then in reducing your hive back to nine frames for the heather all you have to do is to lift off the set of frames above the excluder, take your excluder off and put two racks of sections filled with comb or foundation on, a super cleaner on the top of these, and the nine frames on the top of all to be removed and extracted in twenty-four hours, and there is your hive full of bees ready for the heather, without the trouble of making sure which set of frames the queen happens to be on. Here is the matter in a certainty, and I think I shall try it with one stock headed by a queen hatched last July. But would it not be a mistake to confine the drones in the top storey, above the zinc? Perhaps our friends the Editors would give us their opinion on the above plan.—HEATHER BEE, Northumberland, May 27.

[We strongly object to confining drones. —EDS.]

Queries and Replies.

[3758.] *Making Artificial Swarms.*—I shall be greatly obliged if, through the medium of the B.B.J., you will instruct me on the following points:—On page 21 of the "Bee-keeper's Guide Book" it is stated: "In due time the remaining queen in the cell will take her place as queen of that hive *and swarming be over for the year.*" On 12th inst. I removed a strong stock from its stand to a fresh location, placing on the old stand an empty hive. I took from the strong hive four frames of brood in all stages, including unsealed brood and two frames of combs with sealed honey in them. I put the four bars of brood in the centre of the new hive with a bar of honey on each side of them and two frames of comb-foundation on the side of the frames of honey-comb. There were many bees flying, but they soon settled down. On 22nd or 23rd I propose to examine the four frames of brood, and if there are more queen-cells than one, to remove the surplus ones and to give the hive two more frames of brood from the parent stock in exchange for two of the frames of foundation which I expect to find drawn out. Supposing all to go on well and the young queen to be hatched out and duly fertilised, if I continue to supply this hive with frames of brood from other hives till it is as full of bees as I can stuff it, will there be any danger of the young queen heading a swarm this season and so upsetting all my trouble? If so, would it be well to double the hive by putting a second body-box under the old one to receive the additional frames of brood and placing racks of sections on top of the original brood-nests? I have kept

bees for many years, but have always been disappointed of my harvest from losing my swarms.—C. F. M. M., Alford, Lincs., May 20.

REPLY.—We do not think there will be any danger in the direction you fear. All will probably go on well.

[3759.] *Transferring from Skeps to Frame-hives.*—As you have given me valuable information before, may I again trespass on your space? About a month or more ago I placed a skep of bees on the top-bars of a frame-hive, the latter being filled with comb-foundation as recommended. Towards the end of April I looked to see if the combs in lower hive had been drawn out, and found to my disgust that the foundation had not been touched, as far as I could see. Then on the 17th inst., chancing it without any examination, I put the queen-excluding zinc between the hive and skep, where I intend letting it stop for twelve days to allow the brood in skep to hatch out. After this I am in a fix. Supposing the queen still remained in the skep, I ask: — 1. Could I put a super-clearer between and so leave her alone in skep? Also, 2. Supposing she has gone down to lower hive, could I do this to clear bees from skep, or would it be advisable to drive the bees out? If so, how should I go about it? 3. I have also another lot of bees in a rather awkward box, which overlaps the body-box of an ordinary frame hive, which I have not as yet tried to transfer. Will you tell me the best way to transfer them to a frame-hive, so as to bring in an early supply of surplus honey?—A. W. F., Netley, May 20.

REPLY.—1. We cannot quite understand your "disgust" because the bees in skep had not begun to build out the combs in lower hive in the time specified. As we work out your dates it would appear that the skep had only been for about ten days or so, and the very cold weather during the time would fully explain the bees' refusal to leave the warm skep for the cold, empty frame-hive below. It was also injudicious on your part to "chance it" by putting a queen-excluder between skep and frame-hive on the 17th ult. To do so can only tend to still further delay the bees from transferring themselves below. We advise removal of excluder without delay. Nor is it safe to use a super-clearer in removing bees from skep unless time be allowed for all brood to hatch out. This would occupy twenty-one days, or twenty-four days if drones are hatching. 2. There is no better way of transferring than the one under question, if it is carried out carefully and intelligently.

[3760.] *Indian Honey.*—I am sending you to-day a box containing some honey gathered by bees which I took out to India about three and a half years ago. I would be much obliged if you would give me in an early issue of the B.B.J. your opinion of the same, as to flavour, colour, consistency, etc. I may mention that the honey was gathered in the months of January and February.—G. DE HERIEZ SMITH (Major, Central India Horse), Dulwich, May 25.

REPLY.—The flavour of sample is by no means bad, and we could readily understand some persons who do not care for the ordinary sweetness of most honeys, preferring yours. It is full of character, though we cannot define its source, though it reminds us of Australian honey with a slight admixture of the eucalyptus flavour. Its semi-liquid condition makes it very suitable for table use. The colour is what would be called medium, according to the glasses used for grading colour.

[3761.] *Robber Bees Cast Out.*—Having noticed in your interesting JOURNAL the valuable information you give concerning bees belonging to subscribers, I should be glad if you will tell me what you think has caused the death of bees I am sending herewith. They are some of a stock I drove from a skep rather late last season, and wintered them in a frame-hive, and having fed them well, they now appear to be beautifully strong. I have examined the frames, and they have a fine lot of brood in all stages, and not a sign of disease, and plenty of stores, but they are bringing out bees either quite dead or others partly so, with which they seem to fight on the alighting board until they are quite helpless. I should think they have already brought out quite a pint, and the same thing is going on each day. It distresses one to see the loss of bee-life, and trust you will be able to help me to prevent it. I have ten other stocks which seem to be doing very well, and some are already working well in the supers. The bees I am sending are as I picked them up in a lump at the front of the hive, thinking possibly there may be different kinds of bees amongst them which might suggest they are some from my other hives which have gone there and have got killed. At present I feel my inexperience respecting "bee life" very much, but hope some day to become an expert.—A. E. A., Ashford, Kent, May 25.

REPLY.—The dead bees sent bear all the appearances of having been killed while attempting to rob the hive they were cast out of. The robbers probably all come from one hive.

[3762.] *Queens Duplicating Eggs in Cells.*—I have been surprised to find several eggs deposited in single cells in the combs of two of my hives, although there is ample space for single laying, some combs

having no eggs at all. This occurs in one hive to a less degree than the other, though both are weak colonies. Can you assign a cause for this? SUSSEX DOWNS, May 26.

REPLY.—The duplication of eggs in single cells arises from causes sometimes diametrically opposite. For instance, when queens are losing their fertility they will duplicate eggs and place them irregularly here and there as if all method in ovipositing was discarded. On the other hand, if a very prolific queen heads a weak stock with too few bees to cover her eggs, she will duplicate eggs from sheer inability to control ovipositing, and will sometimes drop scores of eggs on the hive-floor from this cause. In your case it would appear that the trouble is caused through the paucity of bees, and their being unable to cover the eggs if dispersed over a larger surface of comb than bees can cover.

[3763.] *Number of Hives for Given Space.*—I have an apiary 31 ft. in length and 15 ft. in breadth, bounded on the north side by a high hedge, on the other three sides by hurdles 3½ ft. in height. What is the largest number of hives I can place in it without crowding and to give plenty of room for manipulation.—B. T., Bristol, May 25.

REPLY.—The space mentioned should accommodate a dozen hives if so arranged that the entrances or line of flight could be directed outwardly so that the working space would be in centre. Frame-hives are generally spaced 6 ft. apart if room allows, but less space will answer by placing the hives as suggested above.

[3764.] *Working Surplus Chambers Beyond Brood-nest.*—I have several frame-hives made to take fifteen frames, but with only ten now in use. The bees are now at work in eight shallow-frame surplus chambers over brood nest. I intend filling up the vacant space in body-box by laying a board across, and then drawing back shallow-frames to be finished off instead of tiering. Do you think this will answer as well?—A. W. B., Downton, May 29.

REPLY.—Your plan will not be so successful in getting well-finished combs as if you tier up over the ten frames now in body-box. And we should adopt the latter plan in preference, because surplus chambers extended outside or beyond the warmth of brood-nest below are less rapidly filled because of being colder.

[3765.] *Dealing with Foul Brood.*—I am sending to-day under separate cover a piece of comb for examination, and enclose stamped envelope for a line of reply if I am to destroy stock. You kindly gave me advice two years ago as to foul brood in my first stock. Last autumn I again made a thorough overhaul, and found two hives badly and two slightly affected. I dealt with them by getting bees off combs and keeping them without food, and then joining the badly affected ones and taking out all affected combs from others, burning the lot and building up afresh, after spraying everything left in hives. Up to now I have found all the stocks seemingly strong and healthy but this one. It had a drone-breeding queen, which I have removed, and is not strong in bees; but all the other combs seem healthy, and if there is no foul brood in sample I might save the bees. Thanking you in anticipation—W. B., Whitby, May 29.

REPLY.—As notified by post, there is foul brood in comb, and we are glad the stock will now be destroyed as advised. It is far better to do away with the only "plague spot" left in your apiary, and the bees were not worth saving.

[3766.] *Transferring Bees.*—Referring to my query on page 196 of B.B.J. for May 18, I am sorry to give so much trouble and hope the following will make the case quite clear. On April 20 last I purchased two stocks of bees, one of which was in a skep, and the other in a frame-hive. Next day (April 21) I placed the skep over a new empty frame-hive to allow the bees to transfer themselves to the hive below, and the skep still remains there; this lot is very strong. The other stock is in old frame-hive, and is rather weak, with an old queen (four years). The two stocks are thus quite separate. I should be very grateful if you would kindly tell me how to make them both strong stocks, and how to re-queen the stock which now has the old queen, and when to do so? I may say the two stocks have been continually fed ever since I purchased them. Since placing the skep over the new frame-hive (which latter I filled with comb foundation) I have not looked to see if the bees have taken up possession of the brood-chamber below. I send name, etc., for reference, and sign—H. C. R., Beccles, Suffolk.

REPLY.—There should be no trouble with the very strong lot which will probably have taken full possession of the lower hive as a brood-chamber. You had better remove skep and examine the combs below to make sure that all is as it should be there, and if there is plenty of sealed brood we should put a box of shallow frames on top, then replace the skep over all, and cover all down warmly. A week or so later you might examine the skep to see if brood has all hatched out, and if this is so remove skep entirely, and let bees store surplus in shallow-frames only for extracting. With regard to the weak lot

with old queen, you cannot hope to build it up into a strong stock, unless the failing queen is replaced by a young prolific one.

[3767.] *Honey-tins.*—I saw some nice honey-tins a short time ago holding exactly 14 lb. of honey when filled up to the "rim," about 2 in. from the top. The lids were *not* lever-up ones, but fitted *over*, like sweet-tins. These tins were very nicely made, and said to be "air-tight," and the price, by the dozen, less than 3d. each. Can any one tell me who makes these tins? —WORKER-BEE, Cambs, May 27.

REPLY.—We confess ourselves unable to reply to above query. Can any reader help our correspondent?

Echoes from the Hives.

Heswall, Cheshire, May 27.—Swarms have been numerous in this county, and bee-keeping in Wilmslow, Caldy, and Higher Bebington, where our worthy editor once resided in days gone by; good swarms were hived on May 17, which is fairly early for a season like this. Supers are filling favourably, and comb building is going on beautifully. Vegetation has been somewhat checked by the long-continued dry weather, but some slight showers of rain have fallen lately, and bees are revelling in the increased supply of nectar.—JAS. WADDELL, Expert (on tour).

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 8 to 12, at Bournemouth, Hants.—Show of Honey, Hives, etc., in connection with Royal Counties Agricultural Society's Show. For schedules apply E. H. Bellairs, Christchurch, Hants. **Entries close June 3.**

June 14 and 15, at Southend-on-Sea.—Annual Show of the Essex Agricultural Society. Bee and Honey Section under the management of the Essex and Suffolk Beekeepers' Association. Classes open to the United Kingdom. Schedules from Mr. G. R. Alder, Rawreth, Essex. **Entries closed.**

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 13.**

July 19, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 12.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Beekeepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entry to members. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts.

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1 lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood. Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1 lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district.

C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

Notices to Correspondents & Inquirers.

*** Hiving Bees on Old Combs.—Referring to query 3754 last week, we have received the following communication:—"Sirs,—In reply to your correspondent 'Regular Reader,' whose query (3754) appears on page 207 last week, if he will communicate with me I shall be pleased to enrol him as a member of the Lincs. Bee-keepers' Association, and give him the assistance of our expert. I had no idea that any one located so close to myself kept such a number of hives in this district.—R. N. CHAPMAN, Hon. Local Secretary L.B.K.A., Boston, Lincs., May 29."

IGNORANT (Kingsbury, Staffs).—Insurance for Bee-keepers.—If you are a member of the Staffs B.K.A., applications for forms of policy should be made to the Secretary. Non-members can insure by applying to Mr. E. H. Young, Sec. B.B.K.A., 12, Hanover Square, London.

J. E. L. (Dirleton, N.B.).—Flies About Hives.—We never heard of the "bluebottle" fly becoming a serious nuisance about hive entrances; but if troubled in that way we should try sweetened beer, or some similar liquid, in narrow-necked bottles laid near the entrances. These traps are very useful in catching wasps, and should answer equally well with flies.

"SUFFERER" (Bristol.—Remedies for Bee-stings.—Beyond the simple remedies you have tried without effect we might advise a trial of "Grimshaw's Apifuge," a well-known remedy which may be had from any dealer in bee appliances.

D. G. T. (Ilminster).—The dead queen sent was undoubtedly fertilised, the spermatheca containing numerous spermatozoa.

BEGINNER (Plumstead).—Dead Queens Cast Out.—Both queens are quite young, and have probably never taken wing. It is quite the usual thing to see several young queens cast out of hives that have swarmed twice.

"FLOS" (Glenlivet).—We regret delay, but the mem. to which we referred in former issue got mis'aid. We may now say, 1. The honey would have to be boiled for about one and a half hours before it could be safely used as bee food. 2. Unless the bees are a strong lot, and bred this year which is not very likely in your case we advise your running no risks to other stocks by attempting to build up the bees as a swarm.

Suspected Combs.

HARRY JOHNSON (Margate).—Comb shows a pronounced case of foul brood. The stock had better be destroyed and so avoid risk to other hives.

D. M. (Campbeltown).—The bit of old, black comb sent bears every appearance of having come from a hive badly affected with foul brood, but there is not the slightest trace of brood left in the cells, all being dried up and gone—probably years ago.

INQUIRER (Hants).—There is no disease in comb, the cells containing nothing more than hard old pollen.

B. C. O. (Birmingham).—Comb shows foul brood of old standing. You therefore did wisely in taking drastic measures. It will be quite sufficient to deal with the outer-case and roof of hive in the way proposed to make them fit for use again.

C. H. G. (Norfolk).—We find no disease in comb, but queen was evidently a worthless drone-breeder, and you did well in destroying the stock, seeing it was weak in bees. All such comb as sample sent should be destroyed as unfit for use.

W. DERHAM.—Brood in comb seems chilled only, but sample was spoilt for diagnosing through comb being all crushed out of shape and cappings damaged.

T. E. P. (Pewsey).—No disease in comb sent.

M. E.—Both samples are badly affected with foul brood. No. 2 is the worse.

J. C. (Burnt Fen, Soham).—The stock from which comb was taken is badly diseased, and we advise its destruction without delay in view of your other hives near by.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

LAST YEAR QUEENS by return post, 4s. 6d.; 1905 fertile Queens, 6s.—THE APIARY, 8, Grange Street, Saint Albans H 98

STRONG NATURAL SWARMS. 1904 Queen, 12s. 6d., 13s. 6d. Second ditto, 1905 Queens, 2s. 6d. Three Frame Stocks, 1905 Queen, fertile, 12s. 6d. Guaranteed healthy.—W. WOODS, Normandy, Guildford.

BEE GLOVES (with gauntlets), new material, safe and sure, 2s. 6d., post free. "W.B.C." metal ends, 2s. 10d., post free. — GREENHILL, Graham Road, Wimbledon.

28TH YEAR. Imported Italian Queens, 7s. Home-raised Carniolan, 6s. British, 5s. Stocks, Nuclei and Swarms as heretofore.—E. WOODHAM, Clavering, Newport, Essex. H 96

FOR SALE, THREE Strong STOCKS of BEES, in excellent condition; section hives. What offers for the lot?—DODD, care of Joy Bros., Wrotham, Kent. H 97

SECTIONS OF HONEY FOR SALE, 6s. 6d. per dozen, on rail.—CUCKSEY, Burnt Fen, Soham. H 95

SHALLOW FRAME COMBS, drawn out. Ten crates of these for sale. Perfectly healthy and clean. What offers for whole or part?—EADEN, Yardley, Worcestershire. H 94

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

The letter of Mr. W. J. Farmer, on page 211 last week, dealing with the question of foul brood legislation, etc., has been followed by several others on the same subject, including more than one from Mr. Farmer himself. Our correspondents seem to overlook the fact that the continued reiteration of the same arguments and useless acrimonious discussions had become wearisome to the bulk of our readers, and that we have more than once made a request that it should stop. We are, therefore, compelled to withhold from publication the recent letters received. Nor can there be any reasonable complaint on this score, seeing that the question of foul brood legislation was placed entirely in the hands of a committee, appointed by the representatives of county B.K. associations assembled at a meeting convened for the special purpose of dealing with the matter, and at which meeting it was decided that legislation was desirable.

There was also a reasonable prospect of the Bill being introduced as a Government measure, provided that the County Councils would petition for such a Bill, and undertake to carry out its provisions if passed. These all-important points are what the committee of the B.B.K.A. are endeavouring to arrive at, and until the county associations have furnished the information required no further action can be taken.

As will be seen in report of the meeting of the Bee-pest Legislation Committee, held on May 17 (reported on page 201), a further communication was sent to all county associations who had not yet notified the particulars required to do so without further delay. The evidence thus obtained will then be summarised for presentation to the Board of Agriculture, and the result will be made known in the usual way when the proper time comes.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Austrian Bee-keepers.—The annual report of the Central Austrian Bee-keepers' Association is published in *Bienen-Vater*. From this we gather that the association has 34 honorary members, three corresponding members, 707 ordinary members, 7,186 members of affiliated societies, of which there are eleven, and one independent society of 666 members, making 8,596 receiving the *Bienen-Vater*. For the printing of the paper the State allows a subsidy of 7,110 kr. (about £300). The society is also allowed about half that amount for lecturing. From 9,000 to 12,000 copies of the paper are published every month. The membership subscription is 3 kr. (2s. 6d.), entitling members to the paper gratis, schoolmasters 2 kr. (1s. 8d.), and members of affiliated societies 1.60 kr. (1s. 4d.).

Tomtits and Swallows. — M. Laglaine takes the part of tomtits and swallows in *La Revue Eclectique*. He says it is a general mistake to suppose that tomtits come to the hive entrance to catch live bees. They only pick up larvæ and dead bees. Moreover, M. Laglaine turns tomtits to some account, for he gives them drone comb containing brood, which they very soon clean out. To assure himself that swallows do not eat bees, M. Laglaine spread a cloth under a nest. It generally happens in the scramble among the young ones for the food tendered them by the mothers that at least a third drops to the ground. Among all the insects that fell a few drones were found, but never a worker bee.

Daily Consumption of Food by Bees.—M. Sylviac has been carrying out a series of experiments to ascertain the daily consumption of food by each bee, and in an interesting article in *L'Union Apicole* gives the results of his researches. Of course, he points out that the amount varies under different conditions from .003 to .12, and sometimes as much as .24 grammes, but the average most frequently observed was .03 grammes. This last figure shows the daily consumption when a bee is in the hive doing nothing, and the temperature from 68 deg. to 86 deg. Fahr. If the temperature is much below 68 deg. the consumption is double, and may be more. With regard to drones, when active and on the wing the daily consumption per drone is .016 grammes, but when at rest in the hive it is half of this. He adds that a drone does not consume even this quantity of honey, as he does not eat it, and is not even able to uncap a cell. He lives on very diluted and thin honey, and this fact must reduce the prejudice against him. M. Sylviac was able to prove this by collecting drones by means of a drone trap, and when he had got two litres (about three pints) and weighed them, he placed some of them under a bell-glass placed over recently-sealed honey-comb, three honey cells being open. The temperature of the apartment went down to 59 deg. Fahr., and the drones became chilled, and a third of them died of cold in the twenty-four hours. Half the remainder recovered when placed in the sunshine on the second day, but did not eat anything. This abstinence from food continued the following days until the last one died on the fourth day. The honey was not touched. It has been noticed that when drones take honey from the hive it is always from the cells where

the thin honey recently collected is found. The author says he has seen the workers give them this, and by the movement of the antennæ one would suppose that they were enjoying it.

Queen Not Laying Drone Eggs.—It is unusual to find a queen that will only lay eggs from which workers proceed, but we find in the *American Bee-keeper* that Mr. A. C. Miller describes the proceedings of such a one in his own apiary. He had a strong colony that filled three shallow chambers and two supers, which he expected to swarm. There were no outward signs of swarming, and within everything seemed well. There was not a queen cell or a cup to be seen. Each of the three brood chambers was packed with worker brood, and not a drone-cell occupied. The queen had evidently avoided all drone comb, even when she had laid in worker-cells round it. The drone-cells were all clean and ready for use, showing that the workers desired drones to be reared. Mr. Miller thinks this an interesting case, because the queen was in her fourth year, and has once been out with a swarm. Three weeks later the colony swarmed, and a careful inspection of the bees as they were entering the hive showed that there were three drones only, and it is possible these might have joined the swarm when the bees were on the wing. In the colony there was not a drone-cell containing brood in any stage.

Bees and Rheumatism.—It is stated in the *Rheinische Bienen-zeitung* that those suffering from rheumatism have no difficulty in getting a formic acid cure, as the bees are quite ready, if provoked, to make the necessary injections, but in winter this remedy is not available. Internal treatment must then be resorted to, and for this purpose nothing is better than honey diluted with water, to which is added lemon juice. This forms a hygienic beverage that purifies the blood.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

THE "MISSING LINK" TO SUCCESS.

[5905.] *Foul Brood Legislation.* — The movement is not dead, but sleepeth, to waken up, I trust, at the auspicious moment in strength sufficient to carry it into full fruition. While it would be folly to seek to force the pace, it should be remembered that the present Parliamentary Session (and Parliament) is fast running to its close, and that an already overburdened Legislature is not likely to enter on further contentious business submitted to it at the eleventh hour. I would, therefore, urge on all concerned—What thou doest, do quickly, and before a date when anything done will be so much labour lost. Granting that there is some opposition to a measure to suppress this vile scourge of bee-keeping, it would be pusillanimous in those in charge to fold their hands and adopt a do-nothing policy, simply because all bee-keepers do not see eye to eye. Nothing good, or worth getting, is obtained without an effort. I am glad, therefore, to observe that the Committee of B.B.K.A. is still pressing on towards the desired goal.

I have already expressed my astonishment at the attitude of the objectors. The Bill, as drafted, may not be perfection. If they believe it needs amendment, by all means let them strive to the utmost to right what is wrong. But to take up a wholly antagonistic attitude is an iniquitous proceeding. Reviewing all that has been written, I coolly and deliberately assert that I have not come across *one* good or valid reason submitted by its opponents for the uncompromising stand they have taken in seeking to block the efforts to secure this Bill. On the other hand, its supporters have time and again produced numerous arguments, cogent and convincing to an impartial mind, in its favour. I have been taunted with the fact that I am an outsider, and a non-interested party, as the Bill does not apply to Scotland. Why, in my eyes, that is the one blot on the page! Granted I am an outsider; such frequently see most of the game, and are usually best able to take an unbiassed view of the strife, as they can see both sides of the shield.

Those best capable of judging assure me that in other countries where an Act has been secured, if it has not obtained an elysium where F.B. is unknown, it has at least kept the scourge in check and curbed its ravages. If it has done incalculable good in the United States (as it certainly has), why should it not prove a boon and a blessing in the United Kingdom? If this query can be answered, it has never yet been attempted. Indeed, most of its enemies, if they have tried to give a reason, submit only the proverbial woman's, "I think it so because I think it so."

Look at the letter of "County Secretary" (5894, page 206), which is one out of thousands. It is typical of much that works

ruin to the industry, yet some of the chief opponents of the projected measure are adopting almost if not quite the same standpoint. In effect they say, "The law allows me now to do as I like with my own. I will have no man armed with powers to intrude into my demesne, even although what I hide there may work devastation over the whole countryside. Perish the good of my fellowmen, if it depends on any intrusion into what has hitherto been solely mine." Ah, the pity of it!

The query, "*Why has not Foul Brood Extinguished Bees?*" is an interesting one well deserving of discussion. The "survival of the fittest" argument is built on a solid basis of truth, and it is a fact that some members of humanity are partly, or even wholly, immune from certain diseases; or, at least, they pass through life missing the psychological moment when contagion might work its will on them. So I conclude it is at times with bees. But man's guiding hand comes in frequently to their aid, and, under his benign direction, the ravage is stayed. His acts in securing this are generally drastic enough, as he often kills to cure. Here are two telling evidences of his beneficence in saving the race from extinction. A dozen years ago, a bee-keeper having doubts of some of his stocks, cut out a sample of comb, forwarding it to the B.B.J. office. Promptly came the reply, "A case of F.B.," and, succintly put, the advice given was, "Do not tinker with it; go to the root of the matter if you wish to effect a cure." That bee-keeper acted on those wise words so drastically that he soon had as fine and healthy a lot of bees as any one could desire ready for next season's honey-crop, which happily was a bountiful and paying one. The cost was heavy, but by that one season's success he was amply repaid. Last year quite a recent recruit to the ranks got the disease badly, and stock after stock ran down so rapidly that he, too, took extreme measures. This year he has all his hives in first-class order. Every comb is new, every hive sweet and clean, and brood as sound and healthy as any apiarist could desire. Now, I conclude from this evidence of practical experience that bees survive because enthusiasts sink money in the pursuit, and are not afraid to go to the root of the matter when disease assails them.

And yet, and yet, *cui bono?* If that rotting lot of old ruskies, up or down the valley, contains germs of disease of sufficient virulence to taint a whole neighbourhood, what avails it? Here is where legislation would prove a boon. This is what any county inspector, with a head on his shoulders, would set himself to accomplish. Leaving the well-managed apiaries—the ninety-and-nine, I take it—he would make a cleansing raid on these hot-beds of disease, and effectually place them beyond the point of doing harm for ever. Any man who deliberately asserts this is not a consummation devoutly to be desired must have a very cross-bench mind indeed. —D. M. M., Banff.

[It must not be supposed that by inserting the above article we are preparing to re-open the discussion on foul-brood legislation. The fact is, our esteemed correspondent, "D. M. M.," has hitherto—as he says—occupied the position of an outsider (an interested one no doubt) who has held aloof from the discussion. We have, however, no doubt that readers, along with ourselves, will be glad to have the views of one whose contributions to our pages are always both useful and interesting.—EDS.]

BEE NOTES FROM CUMBERLAND.

[5906.] As there seems to be considerable interest on the part of B.B.J. readers with regard to foul brood and treatment of combs to save them, I think it would be a good thing if some bee-keepers who have tried various experiments with success would give us the method followed, such as using combs taken from stocks slightly affected with disease, extracting honey, and syringing pollen, etc., from such combs; using disinfectants in the water, or by spraying after combs are dry with soluble phenyle or some such remedy; and whether, with clean hives and good queens, the disease has or has not reappeared?

Has any one known an affected hive of bees to become and remain healthy solely by having naphthaline continually in the hive? My opinion is that naphthaline will not cure, but it may, and no doubt does, act as a preventive. I would also say if by the use of such disinfectants grubs dying from disease are removed by bees, the spores formed inside the dried-up skin would be removed also; and as spores hatching from bacilli, which succumb to such disinfectants by continued use, one might expect a healthy stock in time, though, in my opinion, such is not the case.

In conclusion, I may say I have never seen such a state of pollen-clogged combs since I commenced bee-keeping ten or eleven years ago, almost all of my thirty hives being the same. I send name, etc., and sign—BEE-WAY, Langwathby, Cumberland.

[Without going far afield for replies to most of our correspondent's questions, which we trust will come from readers as desired, we may reply to that regarding "naphthaline" by asking: Who has ever said that this substance will cure foul

brood? It is sent out from this office labelled "For use in bee-hives as a disinfectant or preventive against foul brood." Surely no mistake can arise here? Again, it is distinctly stated in the "Guide Book" that "although certain disinfectants, such as carbolic acid, phenyle, Izal, etc., while not actually killing the bacilli, arrest their increase or growth."—EDS.]

THE "CLAUSTRAL" HIVE.

IMPROVING THE DETENTION-CHAMBER.

[5907.] Will you give me your opinion in the B.B.J. of the enclosed rough sketch of a suggested improvement in the "detention-chamber"? I have experimented with smoke, and find that in the straight flue the draught goes more or less direct through without ventilating the chamber as it ought to do. My improvement consists of a stoppage as at A in sketch, the holes for ventilation being bored above and below. Thus the air is compelled to enter the chamber by one set of holes and leave by the upper set, and light is excluded at the same time.

The chimney I have made is 1 in. in diameter and 2 ft. 6 in. long, the stoppage being 1 ft. from the bottom of the chimney, thus the 1 ft. 6 in. above is sufficient to create the draught. My original plan was to cut the tubing into two parts, but by keeping it in one length, and using the stop, the chimney is stronger.

I presume the improvement is sufficient to allow of my protecting it, and making it for sale? I hope to exhibit a hive with this improvement at the Southend Show on the 14th and 15th inst. I keep thirty stocks of bees, and make my own hives and woodwork, and am an amateur. I now have twenty-five stocks working in sections. Hoping for your reply in next issue—W. E. E. C., Ipswich, June 5.

[The value, or otherwise, of proposed improvements, such as are suggested in sketch sent, can only be gauged after practical trial, but our impression is that to insert a block in the ventilating tubes as shown would impede the thorough draught required in the detention-chamber. We, therefore, suggest your giving the "improvement" a full trial in use before doing anything further just now. It must also be borne in mind that the "Claustral" hive is patented.—EDS.]

ODDS AND ENDS ABOUT BEES.

[5908.] *Price of Queens.*—To me there does not seem to be any valid reason for the high prices charged for fertile queens, for the following reasons:—1. A small stock is employed to finish queen-cells in a separate chamber that stock suffers no loss. 2. Suppose that another stock is doubled—ten frames of brood above and ten below, including queen—in ten days nine or ten nuclei may be formed without any loss of brood or stoppage of the queen laying. 3. In the course of the season at least a score of young queens may be fertilised from these nuclei, and the total cost is no more than that of a good swarm, and yet £5 would not purchase the same number of queens. A recent writer said that queen-breeders often sacrificed large numbers of queens at the end of the season, as they could not get them sold. But were a reasonable price charged for them (say, 2s. 6d. each), a very good profit would be made by any expert queen-raiser. If he had no honey, he would at least have £2 to £2 10s. for queens, and that from a portion of a single stock.

Hive-roofs.—There is often an outcry over "leaking roofs." The great fault lies, I think, in too little slope. A span-roof, with angles of 45 deg., sends off both rain and snow.

The flat roofs of 15 deg. slope have a notorious habit of warping with the sun, and the next shower gets driven in by the wind. Most of my purchased hives and a few home-made ones to same pattern possess this fault.

Pollen-clogged Combs.—Weak hives store a superabundance of pollen in spring. To remedy this, remove the pollen-store comb, which will always be found next the brood-nest. The clogging of so many combs arises from the queen spreading the nest into the pollen-store, and the bees then storing in the next adjacent one. To prevent this, contrive to keep the pollen-store comb always outside the brood-nest. This may done by giving a sheet of foundation or an empty comb in the centre of the brood-nest. If this is not convenient shake off the bees from the pollen-comb and syringe it out, directing the syringe against the pollen only, and then return to the hive.—D. V., Dunaskin, June 4.

SPRAYING CHARLOCK.

[5909.] A correspondent wrote in B.B.J. of May 4 (page 178), asking whether any harm would be done to bees by farmers spraying charlock. As no one has, so far, answered the query, I may set his mind at rest by saying that spraying for charlock was done months ago, when the corn was from two to four inches high and the charlock had only put forth its first two rough leaves. — C. H. H., Addlestone, May 31.

(*Correspondence continued on page 226.*)

HOMES OF THE HONEY BEE.

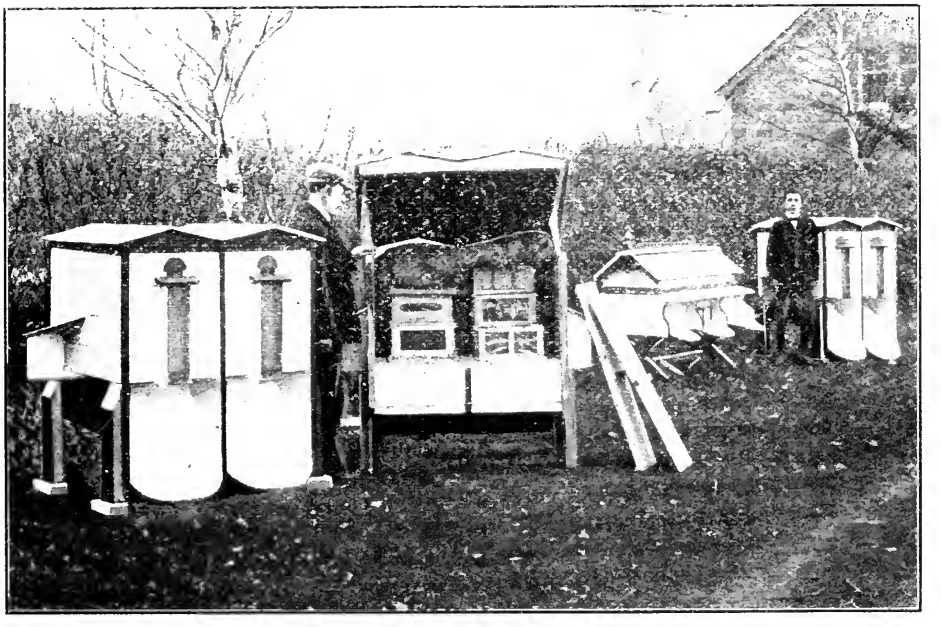
THE APIARIES OF OUR READERS.

The following "notes," written at our request, will be read in connection with the article by "D. M. M.," in our issue of May 25, headed "A Novelty in Bee-hives," which gives a fully-detailed description of the hive seen below. Mr. Reid says:—

"My bee-keeping experiences commenced about forty years ago, and have been of a very varied character. In those days there was need for changes. They say 'necessity is the mother of invention,' and in my case it proved to be so, for I have been dabbling more or less at it ever since.

"In accompanying photo readers of the B.B.J. will see at any rate something out of the usual order in your 'Homes' pictures. Over the hedge, in a beautifully-sheltered situation, stand the bulk of my hives. There can be seen the 'Darwinian theory' demonstrated in bee-hives—the different stages of evolution leading up to my present ideal. As I farm over 200 acres of arable land in a good district, there is plenty of clover about, and I have also two out-apiaries where both clover and heather honey are got. In writing these 'notes,' I shall only describe what is seen in the photo, as being probably of more interest than an account of my bee-keeping experiences.

"The third hive from the right is an ornamental one, made nearly thirty years ago. It contains three colonies, two of which are beautiful yellow bees, the produce of queens I got last season from Mr. Taylor, Ilminster. The other three hives are alike, and illustrate the 'Novelty in Bee-hives' referred to in B.B.J. of May 25 by your contributor, 'D. M. M., Banff.' This is my ideal house for bees. The boy standing in the background is my son, with whose help I was able to turn round the second hive seen, in order to show the interior and back arrangements. The unopened part at rear is the door of the combined super-clearer and cupboard. The back-door of the hive proper is in two parts, the top half only being removed for ordinary manipulating. The openings made at the sides when the roof is raised are closed in with canvas, as seen. By this arrangement the bee-man is practically in a tent, sheltered from the elements, hidden from the bees, and can manipulate with safety and comfort.



MR. ALEXANDER REID'S APIARY, BALLOAN, URRAY, ROSS-SHIRE.

"The height of the hive—while providing a large alighting surface for the bees, and sufficient space for the cupboard—enables the bee-keeper to operate without bending, thereby removing the temptation to use language other than flowery when the painful process takes place of straightening one's back after bending over ordinary hives.

"The front view shows the position of drone and queen traps and swarm-catchers. When the time arrives to use this arrangement, the outside block—which lies on the

top of the ventilator—is removed, thus allowing the light to enter; seeing that the main entrance at top of the alighting-board has a bend in it which darkens that part, the drones and queens are naturally attracted to the light, and are led under the cone which conducts them into the trap. The size of the hive, being both long and broad, entirely prevents it from being blown over, gives ample room for expansion as the season advances, and also offers special facilities for always having young queens at the head of the colonies at the end of the season.

"I may say bee-keeping has been with me a life-long hobby; the most pleasant part of the farm to me being the bee-department, and the hives I derive the most pleasure from are those shown in the photo. I conclude my 'notes' by wishing all readers of the B.B.J. a prosperous season."

CORRESPONDENCE.

(*Continued from page* 224)

A SWARMING INCIDENT.

[5910.] In July, 1904, a second swarm came off one of my frame-hives and clustered on two branches of the hedge. Thinking there were two queens, I hived each cluster separately in a skep. But in the morning one of the skeps was found empty, from which I judged there was only one queen and the queenless lot had gone back to the parent stock. As was to be expected it was a very weak swarm, but it has survived the winter in the skep. The bees, however, are now very few in number, so on Saturday (May 27) I examined the hive to see if I could find any brood. There was scarcely any to be seen, but I saw about two dozen sealed drone-cells. I have been feeding the bees with syrup, but they only take down a cupful in two or three days, though, if the syrup was warm, they took it down quicker; otherwise they seemed not to notice it. They have also been very troubled with robbers of late, so I narrowed the entrance just sufficient to let one bee pass at a time. Some pollen was being taken in. This afternoon (May 29) I was sent for as a swarm was said to have come off my hive. I saw at once what had happened—the bees had left the skep, and I found on looking in about a dozen left. I could not say whether the queen had gone or not, though I overtook the bees which were very scattered. Sometimes one here and there rested on the ground and then rose again. This went on for a quarter of an hour the bees getting further from home, about 200 yards. Seeing they were never clustering, I lifted a "divot" (?), placed it on a post, and in a short time the bees clustered. I went home for the straw-hive (from which they came) and left it placed on the post. About an hour afterwards I came back and brought hive and bees home. I should like you to tell me if it is common for bees to behave as they did, and what was the probable reason for their going away.—D. R. MacK., Banffshire.

WARNING TO BEE-KEEPERS.

[5911.] I had the enclosed Press cutting from the *Walthamstow Guardian* given to me yesterday, and as it is, I think, somewhat unique in its way, you might perhaps find room for it in the B.B.J. One sees and hears so much of the other thing that a paragraph like this is quite refreshing, though there would, I fear, not be a great chance of any other bee-keepers noticing the floured bees entering their hives. I am sorry to say that F.B. is increasing in this county (Essex), more hives and more apiaries being found affected than last year.—J. Herrod, Expert (on tour for Essex and Suffolk B.K.A.), Chingford, June 3.

To the Editor,
Walthamstow, Leyton, and Chingford Guardian.

Sir,—As there are some apiarians in the town, may I, through your kindness, state that last Sunday one of my stocks was robbed out by others, and I have since found it was suffering from "foul brood." Bee-keepers will know what this means.

I took the precaution to flour the robbers so that if any brother of the craft should have noticed any of his bees returning to the hive dusted as I have described, he will be glad to have this notice, and will no doubt take the necessary precautions to remedy any mischief resulting. Thanking you in anticipation. Skep.

WEATHER REPORT.

Westbourne, Sussex.
May, 1905.

Rainfall, ·46 in.	Minimum on grass, 28° on 11th.
Heaviest fall, ·19 on 1st.	Frosty nights, 1.
Rain fell on 5 days.	Mean maximum, 62.
Below average, 1·36 in.	Mean minimum, 42·7.
Sunshine, 30·7 hours.	Mean temperature, 52·3.
Brightest day, 28th, 14·8 hours.	Above average, 1·1.
Sunless days, 1.	Maximum barometer, 30·42 on 9th.
Above average, 72·9 hours.	Minimum barometer, 29·37 on 2nd.
Maximum temperature, 74·5° on 29th.	L. B. Birkett.
Minimum temperature, 31° on 24th.	

MAY RAINFALL.

Brilley, Herefordshire.

Total rainfall, .48in.
Greatest fall in 24 hours, .18 on 2nd.
Rain fell on five days. W. Head.

Echoes from the Hives.

Rossett, Wrexham, June 3. — Saved! at least for the time being. Rain fell copiously in Cheshire during the last week, clearing the atmosphere, and washing away the traces of honey-dew, which was beginning to show on various trees. Odd heads of white-clover bloom are now seen in various parts I have visited, and with strong stocks on hand we may reasonably expect a good yield of honey.—Jas. Waddell, Expert (on tour).

Higher Bebington, Cheshire, June 5. — I took a peep on Saturday, June 3, at the supers on two of my hives, and was agreeably surprised to find several of the centre combs with large patches of sealed honey in them, the rest of the combs being nearly full, but not sealed. The hives were supered with built-out shallow-combs on May 20—just three weeks ago. Is not this very early for our district of Wirral? Several of my other hives have drawn out a rack of shallow-frames in less than a week. Hoping for a record yield this season.—E. D. K.

[Our own apiary was located within a quarter of a mile from where your hives now stand for over twenty years, and during the whole of that time we do not remember ever having supers completed so early as the first week in June. In fact, we considered it good form to have the bees in full possession of surplus-chambers and starting work by June 10. It thus becomes plain that the present honey-season is exceptionally early for your part of Cheshire. —W. B. C.]

Queries and Replies.

[3768.] *A Lady Bee-keeper's Swarming Troubles.*—A swarm issued from one of my hives on May 26, and was safely put in a new hive on nine frames of foundation, and one frame removed from the parent hive containing capped honey and drone-brood, and got badly stung in taking it out. Four days later (May 30) I looked through the new hive and found all the nine frames of comb well drawn out, and containing a good deal of honey, as well as pollen. I could not see the queen owing to the bees being so thick on combs, but I suppose she is all right, as bees were so busy pollen-carrying. It seems a waste to have so much honey in brood-chambers, so I ask :— 1. Should I put on a rack of sections, or would it be better to give a box of shallow-frames for surplus storing? I think the swarm must be a very good one to do so much work in four days, and if the bees would work in sections, I would prefer to get a few from them, rather than combs for extracting. The bees are still working in sections on the parent hive, and if it swarms again, I will return the bees. My other hive is very crowded with bees, though it has three racks of sections on, and being filled. 2. Do you advise me to remove the sections, and see if there are any queen-cells in brood-nest, and destroy them if found? I do not want the work in sections stopped if I can help it. My hives are in a small orchard beyond the kitchen garden, and seem to do well. I send name and sign—E. M. M., St. Asaph, N. Wales.

Reply.—1. If sections are wanted, a rack of same should be given at once. 2. No ; the parent hive had better be allowed to swarm again, as it most likely will nine or ten days after the first swarm issued. Keep the bees in hiving skep till next morning, then return them to the parent hive as early as possible. (It should be done before 6 a.m.) The bees will then settle down and not swarm again.

[3769.] *Drones Dead — Drones Cast Out in May—Re-queening Stocks.*—1. For the last week or ten days I have found several drones cast out dead and half-dead in front of my hives. I have not noticed this before so early in the year, though I have taken interest in bees for several years. What may this occurrence be attributed to? 2. Ten days ago I noticed that one of my stocks was perceptibly dwindling. On examining I found no brood or eggs in combs. As an experiment I removed to the hive in question two frames from another stock, one with queen-cell on comb, but I did not notice whether there were any drone-cells. I now find that the workers are carrying pollen in freely. Is it likely that the queen will be fertilised should there happen to be no drones in that particular hive? 3. In her marital flight—if such is possible in her case — will the drones from other hives accompany her? Kindly reply to the above in B.B.J. — T. H. H., Ogwen Valley, June 3.

Reply.—1. The adverse weather of a week or more during the month of May will account for drones being cast out. 2. If a queen has hatched out from cell given, there is no reason why she should not be fertilised. You should know that queens usually mate with drones from other hives than their own. 3. This query is answered above.

[3770.] *Proper Times to Handle Bees.*— I began bee-keeping last year again, having done something at it years ago in British Central Africa, with the kind assistance of the late Mr. Raitt, of Blairgowrie. My bees have done well over the winter, and are now very busy. I have been working

away a good deal with my single hive, for I am trying to rear queens in one part of the hive, as recommended by Mr. Sladen in his "Queen-rearing." I have only had a few stings, though I generally worked without veil or smoke or gloves. Could you tell us all or most of the times and circumstances that make bees easy to handle, and likewise give us a list of those that tend to make them cross and aggressive? It would guide some of us, and help us to go about less "swollen up."—J. W. Moir, Edinburgh, June 2.

Reply.—The main things that tend to make "handling bees" simple and easy include: 1. Gentleness and quietness in all you do. 2. The judicious use of a little smoke (not tobacco smoke) before lifting out frames, etc. Some bee-keepers use a carbolised cloth in lieu of a bee-smoker, but the great majority use the smoker. Among the large bee-keepers of America and other places the latter is invariably used by every one. 3. Not to attempt manipulation on days when bees are not working. It is also advisable to always have a veil on the hat when working, not lowered to cover the face, but ready if needed. It gives confidence. On the other hand, the things to avoid are roughness and haste in manipulating, and anything in the shape of "banging about." Also never to attempt removing honey on days (which sometimes occur) when bees are irascible and inclined to sting. When this is seen, defer operations till another day, when all may go on quietly and easily. Do not attempt to beat the bees down and master them on adverse days, or you may be mastered yourself, and will not forget it for some time.

[3771.] *Vagrant Swarm Entering Deserted Hive.*—Will you kindly inform me if the enclosed queen-bee has been hurt? Also if the samples of comb sent are affected with foul brood? The samples were taken from a hive that was strong in bees the first week in May. I transferred them into a clean hive, putting the latter on the old stand. A few days later I saw dead bees lying outside, also some few bees crawling about on the ground. Since then the stock has gradually dwindled, and at last died out, leaving the queen alone in the hive. On Friday, the 1st inst., she walked out and fell to the ground. Several of the frames have sealed brood in them similar to that sent, with very few unsealed grubs. Is not this an extraordinary occurrence? To put the finish on the case, I may also say that the hive was taken possession of at mid-day on Saturday, the 2nd, by a vagrant swarm. I send name, etc., and sign—B. B., Worcestershire.

Reply. Dead queen sent has not been injured, but has simply died from cold and hunger. The bulk of dead brood in comb is chilled, but a few cells show slight but unmistakable signs of foul brood. There must have been some want of due care in transferring the combs to new hive if the brood in combs get chilled in the operation. Nor can we account for a strong stock dwindling away to nothing three weeks later. It seems probable that some of the bees have left and joined on to some other stock. With regard to the vagrant swarm now in possession of the deserted hive, we should certainly get the bees off the present combs and put them on new frames fitted with full sheets of foundation. They can do no good on combs containing dead brood affected with disease. If this course is followed the bees should be kept indoors in a skep while the hive is being well scrubbed out with hot water in which a good handful of common washing soda is dissolved.

[3772.] *Transferring to "W.B.C." Hive.*—On March 22 last I purchased a skep of bees and placed them in a "W.B.C." hive on the top of ten frames filled with full sheets of foundation. This was done in accordance with the instructions of a brother bee-keeper. On examining the bees on Tuesday, May 23, I found all the combs in lower hive worked out, and a very small quantity of honey and pollen in them. There was, however, no brood or eggs, which, of course, showed that the queen had not yet gone down. The stock is a very strong one, and seems to be doing well. I should like to ask if, when the queen has gone down, and the skep is clear of brood, it will be right to remove skep and put on either a rack of sections or shallow frames, or would it be better to allow them to store in skep? I send name and sign—"A. B. Ginner," Tring, May 26.

Reply.—It is fairly safe to assume that the warm weather during the last week will have caused the queen to take possession of frames of lower hive for breeding purposes before this is in print. It would, of course, not do to remove the skep till all brood has hatched out, but if weather continues favourable we should give a box of shallow frames with full sheets of foundation in a few days, and place the skep on top, where it might remain till the brood has hatched.

[3773.] *Queen Lost in Spring.* — I have sent you by same parcel a small piece of comb taken from a hive which some bee-keepers here tell me is affected with foul brood. I also send a few of what I think are drones, but my friends say they are "mongrels." I will be pleased to have your opinion through the B.B.J. regarding both comb and drones. I searched for

and saw the queen some time ago, and I thought it was a beautiful one of full size. I also showed it to a bee-keeper, who declared it to be as fine a queen as he had ever seen. For more than a week past I have looked over the combs in vain, never having seen the queen again, and the bees are dwindling away. There has been no worker-brood in the hive for a long time, but there are a great many of what I call drones in the hive. Please advise me what I should do with the hive, whether to destroy it or not. A friend wishes to give me a frame of brood from his hive, and he says the bees will rear another queen. I have only newly started bee-keeping, and in consequence have no experience myself. Thanking you in anticipation, I send name and sign—AMATEUR, Lanark, June 1.

REPLY.—There is no disease in comb, but only drone-brood and drone-bees hatching out. It is clear the queen met with some mishap when the hive was examined some time ago, as so fine a queen could hardly have been a worn-out drone-breeder. As there are so few worker-bees now in the hive, it is hardly worth re-queening.

[3774.] *Forming Nuclei—A Lady Beginner's Experience.*—I should be very glad if you would tell me if the enclosed comb contains foul brood. I noticed it to-day for the first time in a nucleus hive, and am anxious to know so that I may do everything to prevent the disease from spreading. I have not seen anything like it in any of my other hives. On May 10 a swarm left one of my hives, and a week later I formed three nuclei from the old stock. The queens in the other two nucleus hives are now laying. I bought the hives from a person at Hinckley, who advertised them in the B.B.J. I did not think the hives were second-hand, but as they looked shabby I fumigated them thoroughly with sulphur. I only started bee-keeping last year, and have been very careful to keep my hives very clean and to use naphthol beta when feeding the bees. I have also kept naphthaline in all my hives. If the brood is diseased, would it be safe to introduce the queen to a stock that wants re-queening?—E. N. B., St. Minver, N. Cornwall, May 31.

REPLY.—You need have no fear so far as regards disease in the nucleus referred to. The brood in comb is "chilled" only, and will probably be the result of a cold night with not bees enough in the small colony to cover all the brood. We consider you have done very well indeed to have queens in all three nuclei laying after such a cold time as was experienced during the greater part of May; and, now that the weather is so favourable, all will no doubt go on well.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 8 to 12, at Bournemouth, Hants.—Show of Honey, Hives, etc., in connection with Royal Counties Agricultural Society's Show. **Entries closed.**

June 14 and 15, at Southend-on-Sea.—Annual Show of the Essex Agricultural Society. Bee and Honey Section under the management of the Essex and Suffolk Beekeepers' Association. **Entries closed.**

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. **Entries closed.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon, Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 13.**

July 19, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 12.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Beekeepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entry to members. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts.

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

MR. G. E. ROGERS writes as follows:—"Referring to query No. 3767, if 'Worker-Bee' applies to the hon. secretary, Cambs and Isle of Ely B.K.A., Beeholm, Newnham Croft, Cambridge, he will probably obtain the information required."

F. J. H. (Cranleigh).—Book on Bees.—We are obliged for your suggestion, but fear it would hardly be possible to compile an interesting volume from back numbers of the B.B.J.

R. W. O. (Bromsgrove).—Queen Cast Out of Hive.—The dead queen sent is quite young, and has apparently been roughly mauled before being cast out of hive. The occurrence points to the probability that the hive will not swarm again this year.

Suspected Combs.

G. A. (Derby).—There are slight signs of disease in comb sent, but apart from that the stock must have been headed by a drone-breeding queen for some time past, as there is nothing but drone-brood in worker-cells. Regarding the "frame with eggs" given a month ago, the bees have evidently made an effort to re-queen, but the larva in unsealed queen-cell sent must have been dead for several weeks past. We need hardly say the stock in question is now worthless.

J. S. R. (Rugby).—Though cells of sample comb are mainly filled with pollen, there are slight signs of disease, and combs are very old and black; we should burn them along with the few bees left.

J. E. S. (Glamorgan).—All four samples of comb are affected with foul brood; Nos. 1 and 3 especially so. In 2 and 4 the disease is of more recent date, but is developing fast. If you have many healthy stocks on hand, we should make short work of the four hives in question for the sake of the others.

J. McK. (Banffshire).—In No. 1 sample the cells are partly filled with mildewed pollen, but nothing worse. No. 2, marked "Heather," shows a bad case of foul brood of old standing.

CLOISTERS (Abergavenny).—There is foul brood in comb sent, and as the stock is weak we should not try to save the bees. Far better to destroy the lot.

A. W. B. (Braintree).—Your sample is not suitable for diagnosing. To judge properly we need a sample of larvæ, sealed or unsealed, in some stage of decay. The three sealed cells in comb had no trace of brood left in them. The unsealed cells contain only mildewed pollen.

M. M. R. (Coventry).—All traces of brood dried up and gone long ago in sample, but the appearance of sealed cells, etc., shows unmistakably that there had been foul brood in hive.

NEW READER (Northumberland). — The eleven samples of comb are all old and black, with no trace of brood in any but No. 5 and No. 10. The latter have a suspicious-looking cell or two in them; but, on the whole, we should not use any of the combs from which samples were taken. They are not fit for use with new swarms. Better to melt them down and have new, sweet combs built.

W. P. (Cardiff).—Although comb is newly built, and contains lots of brood in normal condition, there are several cells badly affected with foul brood.

J. C. (Astley).—Comb sent is full of dead bees and chilled brood. Such combs should be burnt, as being of no use even for wax.

J. H. (near Preston).—Both samples of comb sent are badly affected with foul brood.

Editorial, Notices, &c.

IMPORTANT NOTICE.

REMOVAL OF "B.B.J." AND "RECORD" OFFICES.

Owing to a change of landlord, and the new freeholder requiring possession of the whole building No. 10, Buckingham Street, Strand, our enforced removal follows as a natural consequence. We have, however, been fortunate in securing commodious offices near at hand, right in the centre of the publishing trade, No. 8, Henrietta Street, Covent Garden, W.C. The new premises are only a few hundred yards away from our present offices, and about three minutes' walk eastward from Charing Cross Station. Friends wishing to make a call will therefore have no difficulty in locating the new address, where all communications must be addressed after the 21st inst.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of May, 1905, was £6,595. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5912.] The bee-season still delayeth its coming. More than a third of June has passed and not a good bee-day in the whole twelve. The fields are covered with blossom, but the weather is so unpropitious that the poor bees cannot leave their hives for the ingathering. We had only two hours' sunshine here from Sunday till Sunday, rain falling on most days, and when not raining a leaden sky overhead with cold NE. winds prevailing. It makes one long for a rift in the clouds and a fortnight of settled weather so that our bees, with hives full to overflowing of enforced idleness, could put forth their strength and garner some of the season's honey and also send forth some big swarms to gladden the heart of the bee-keeper.

The inherent continuity of the *Apis mellifica* as a race, has never, in my opinion, received such a series of varied shocks as it has during the past thirty years. The whole trend of modern bee-keeping is the dissemination of contagion of the bee-keeper's worst enemy. The advertising pages of our B.B.J. have, during that time, teemed with offers of bees for sale; some healthy, some more or less diseased, with the inevitable consequence that disease has been spread far and wide and into districts in which it was unknown before. Then the English race of bees was not either dear or handsome, or handsome enough for some faddists (men with more cash than judgment), who introduced the foreign races, and whatever the present condition of these bees may be as regards disease, those imported twenty years ago undoubtedly came diseased; apiary after apiary to which they were introduced became diseased shortly afterwards. Then the bee-driver came on the scene, hoping, no doubt, to add to his income by driving his own or his neighbours' bees and selling them, with the consequence of indiscriminate driving of bees, both healthy and diseased. These, too, are offered for sale in the season, and are used to establish stocks, or strengthen weak colonies. In the olden time, the brimstone match would have made short work of the lot; the wax would have found its way into commercial uses; but modern bee-keeping requires foundation, and for many years the bee-keeper's wax has been converted into comb-foundation for his use over again. The question arises, Have these parcels of wax been cleansed from foul-brood germs? For myself, I doubt it. I do not contend that, with our present knowledge of foundation-making, it may not be so cleansed and rendered free from contagion, but less than a decade ago no foundation-maker, to my knowledge, asserted that he attempted to sterilise the wax sent to him. Therefore, in how many apiaries, foul brood was introduced in this way, we know not. My own belief in the future of bee-keeping is that it will become a specialised pursuit, and that, in the hands of men who will give their attention to honey-production, the busy bee is not likely to become extinct from foul brood.

The hard case mentoned by "County Secretary" (on page 206) appears to me on a par, so far as the law of compensation is concerned, with that of the solicitor I read of in the paper at the time, who a few years ago, sued a farmer for allowing thistles to go to seed in his field, and the seed to be carried by the wind into the solicitor's garden. The case was decided in favour of the plaintiff, and £5 awarded as compensation. — W. WOODLEY, Beedon, Newbury.

A SWARMING INCIDENT.

A WORD OF WARNING.

[5913.] Referring to the letter of "D. R. MacK." (5910, p. 226), it may be said that once in a while these hunger or starvation swarms quite unexpectedly "come off," as in my own case. Sitting in my garden last Sunday (June 4), during a spell of hot sunshine, all at once the familiar sound caught my ear, and, looking round, there, sure enough, from my weakest stock the bees were tumbling out pell-mell in real orthodox fashion. I knew alas! it was a sham swarm, for there was not more than a quart jugful of bees in the stock altogether. However, in a few minutes the bees were all out, and soon began to cluster in a neighbour's garden, but, queerly enough, settled on the leg of a hive, from whence a carbolic cloth quickly shifted them; the queen, taking wing once more, alighted on the roof of another hive, and the flying bees began to settle beside her. My attention was drawn to it, when I soon had her ladyship captured and back in her hive, which was, with the exception of a score or so of very young bees, entirely deserted. The renegades, however, soon returned to their home, and in fifteen or twenty minutes all had gone back. By this time I had placed a bottle of syrup on the feed-hole; this, of course, was the perfect cure, and it is certain that want of food is the usual cause of these hunger swarms.

I notice to-day (June 8) that my best stocks have thrown out most of their drones—even the drone-brood. This tells its own tale, and proves that feeding must be resorted to at once. And I would, therefore, warn all bee-keepers in this district to make quite sure that every stock has plenty of food. Bees will be quite unable, so long as these keen, cold winds are with us, to replenish their stores, and, except in the very strongest stocks, supers should be removed and the feeding-bottle put on at once. I offer this as a "word to the wise."—J. W., Bramhall, Cheshire, June 8.

BEE-KEEPING IN NEW ZEALAND.

[5914.] It is now many years since we have seen a copy of the B.B.J., and shall be glad if you will send it to us for a year. Under separate cover we send you our catalogue for season just closed. As you will see we have been importing most of our sundries from America, but would like to get some from England if possible. I suppose the "Weed" process foundation is made in England, and would like to know who are the leading export firms? We do a large cardboard-box business as well as dealing in bee-hives and appliances. We may refer exporters to Messrs. A. J. Brown Brough, 29, Warwick Lane, London, J. Lennard, Rue Belliard, Brussels, and James Spicer and Sons, Upper Thames Street, London.

Bee-keeping is making rapid strides in New Zealand, and at an exhibition to be held in Christchurch next year we intend to have a large exhibit of bee goods. We understand you publish, illustrated, the British Bee-keepers' Association Diagrams, relating to bees and bee-culture, and shall be glad of full particulars regarding these. If we should sell, say, twenty to fifty copies of your paper per week, what price would you supply at, and what would we sell at?—ALLIANCE BOX COMPANY, Castle Street, Dunedin, N.Z.

[B.B.J. will be forwarded by post from this issue to end of May, 1906, as desired. We have no doubt that some of our leading appliance-makers will be very pleased to send you their terms of doing business for export. We may also say that British "Weed" foundation is now made by a London firm, as will be seen in our advertisement pages. The diagrams published by the B.B.K.A. are now out of print. The B.B.J. will be supplied at usual wholesale rate of 25 per cent. discount off published price, postage on twenty copies, in bulk, will be 4d., so you could arrange your own rate to subscribers in New Zealand. If preferred, we could post single copies direct to subscribers in New Zealand for 2s. 2d. per year beyond the prices quoted above if subscription is paid in advance, thus saving double postage.—EDS.]

BRITISH BEE-GOODS IN S. AFRICA.

[5915.] I enclose a copy of a letter which I have written to the *Natal Agricultural Journal*, and, in connection therewith, I would say if the manufacturers of bee-appliances in England wish to prevent the Americans from obtaining a monopoly of that business in Natal, they should at once take steps to prove to the inhabitants the advantages of the British Bee-keepers' Association's "standard frame-hives" for use, and made in England.

The *Agricultural Journal* and the *Times of Natal*, both published in Pietermaritzburg, should prove useful media for correspondence on this subject.—HUGH M. MEYLER, Utrecht, Natal, S. Africa, May 12.

To the Editor of
The Natal Agricultural Journal.

SIR,—I notice that a well-known Natal firm, who have recently been advertising bee-appliances, are stocking the American makes. If the bee-keepers of the Colony

ever hope to co-operate, as has been done in the different countries of Europe, they must decide once and for all whether they will adopt the English or the American hives and frames as their standard.

The whole basis on which scientific bee-culture stands is the fact that all interior parts of hives must be interchangeable, and there can be no combination amongst "bee-masters" unless this uniformity exists throughout their various apiaries.

The chief difference between the two systems is the variation in the size of the frames in which the brood is hatched, and correspondence through your columns from those experienced in both methods in S. Africa would be most instructive.

The formation in Natal of a body similar to the British Bee-keepers' Association would do much to encourage a most attractive hobby, which has also been developed into a profitable industry in Europe and America. — Yours faithfully, (signed) HUGH M. MEYLER, Utrecht, May 12.

BEES AND CHEMICALS.

[5916.] It is probable that the chemicals used in spraying are not beneficial to bees. "W. H. B." (5888) wishes for my experience as a resident in a district where arsenic, etc., is produced. So far, I have not observed any ill results. My bees are increasing at a very rapid rate at present, but I do not think there is much arsenic now produced here. There is a works about a mile away, but I do not think my bees go in that direction. Older residents inform me that bees thrive here, though I myself do not consider it by any means an ideal district for them, being rather bare of trees. If, however, there be plenty of clover, that will not matter much, as the tree honey is chiefly valuable for breeding purposes early in the year. I find the bees are now bringing in some sycamore honey; but as the trees are not very numerous, the quantity is not large. This honey is very palatable.

I know of one district in Cornwall where, in my opinion, foul brood had more to do with wiping out bees than had the arsenic, which was blamed as the cause.

Still, I should think that arsenic would be injurious if the bees took it extensively. We know that in small doses it has no immediate ill effects on mammalians, but whether it acts similarly on bees I do not know.

One thing is certain, that if natural honey be plentiful bees will touch nothing else, not even the best-made syrup if exposed in the open garden. Possibly the chemicals used in spraying do not penetrate to the honey-chambers of the flowers, and, if so, the bees would take no harm. If only we had an experimental apiary all these interesting problems might be solved.

A Safe Method of Using Eucalyptus Oil in Hives.— I have made an experiment in my own apiary in order to find a safe way of using eucalyptus oil in a bee-hive. The same was strongly recommended as a foul-brood preventive in a paper in the *Bulletin de la Société Romande d'Apiculture*, as reviewed in the B.B.J. of March 23, 1905. The writer, M. Louis Chevalier, found that it required extreme care to administer it, or it killed the bees instantly. This method was to saturate a metal plate with the oil, and over that to place another plate, perforated to allow the fumes to escape. These he slid under the frames, and the fumes going upwards pervaded the hive and absolutely prevented the spread of foul brood. It struck me that his method, as he himself states, was rather troublesome, and I experimented with a view to finding a more convenient plan. I obtained a piece of half-inch brass gas-pipe, four inches long; this I perforated along one edge with thirteen very small holes. I then soldered a wire, one-sixteenth inch, to one end, as a handle. The interior of the tube I filled with cotton wool saturated thoroughly with the oil, and then corked up the ends. I then inserted it through the entrance right to the back of the hive, underneath the frames. The experiment was tried on my weakest stock, as I did not wish to risk a good one, and I found that the fumes had no ill effect on the bees, but that they stopped up the small holes. I then made four larger holes about one-tenth of an inch in diameter, and, putting these under the tube where the bees could not reach them, found they were not closed up. The tube may be absolutely filled with the oil, provided the cotton be inside to hold it. I believe a tube twelve inches long, with more holes, would be more effective and equally harmless.

Those afflicted with foul brood might carry out the experiment further than I have done. M. L. Chevalier states that he cured all his hives with eucalyptus oil. I thought, therefore, the matter well deserved attention. If this be an effective cure it should be widely known, and by the tube method it is both easy and safe to administer, while the oil costs only 6d. per ounce. — W. J. FARMER, Redruth.

LEAKY ROOFS.

[5917.] May I suggest to "D. V." (5908, page 224) and others who may not know it, a light and inexpensive cure for leaky roofs? Procure some coarse calico, or, what is better still, a canvas that the drapers call "dandy," costing about 6d.

per yard, a pennyworth of half-inch tacks, two pennyworth of boiled oil (in which a little gold size has been added) and some paint. Turn one edge of the canvas up half-an-inch and tack same neatly on to one edge of the roof; then give the roof a good coat of thick paint (any colour will do), press the canvas into the paint and stretch it over, tacking the edge in the same way as before; then tack the ends, pulling the last edge as tight as possible. Now give the roof a good coat of the boiled oil, and, when dry, give at least two coats of good oil paint. This done, with an annual coat of paint, you have a roof, flat or slanting, that will keep out any wet. This is how the roofs of railway carriages are done.—F. J. H., Cranleigh, June 9.

A NOVEL BEE-HIVE.

[5918.] In the hall yard of the country seat of Sir Richard Musgrave, at Edenhall, Cumberland, stands a monster sandstone pump-trough, circular in shape, and dressed from one solid block. A brass plate on the front informs the stranger that the trough, weighing sixteen tons, was brought to its present position on rollers by the estate workmen's voluntary efforts, after the day's work was over, from a quarry two miles away. Round this trough, to catch the overflow, runs a channel with a grate in it. One day recently, one of the foremen drew my attention to bees going down this grating and asked the reason. I said, probably for water. He said, "Come and see; it is a swarm." I went, and, sure enough, nearly every bee that came, while I was there, went in laden with pollen. He told me that a swarm went down the grate a year or two ago. Surely, this is a strange bee-hive! I do not remember seeing any similar thing mentioned in your journals since I commenced reading them. We tried for nearly an hour to get the grate out, but it had not been touched since 1842, when the trough was fixed there; and all our chiselling proved unavailing.

The C.B.K.A. expert, G. N. Avery, last week removed from the roof of the church at Edenhall, a truant swarm, healthy, and with nice store-combs well filled. Bees have often been removed from this place, but another swarm soon finds its out.

It may be useful to many to know how to sink the wire into frames of foundation without sticking the wax to the block. I never had any difficulty in this until this season, and it was probably owing to using the light weed brood, nine sheets to the pound. I had great difficulty in getting any sheets to lift without tearing the wire half out. I tried placing a sheet of the tissue paper between foundation and block, and though the embedder was hot enough to melt the wax, the paper peeled off quite easily, and the wire remained fixed in centre of foundation. A saving of time and trouble equal to one-half.

The copious showers we read of in the South and Midlands still give us the go-by, and we have had no rain now for weeks. The pastures are rapidly assuming a brown shade, which points to a want of water, likely to bring a serious loss to farmer and bee-keeper. The hawthorn is now in splendid bloom with us, but too dry for much nectar storing. I send name and sign—Bee Way, Cumberland, June 10.

A LAST LINE ON FOUL BROOD.

[5919.] It would not be courteous on my part to seek to obtrude any further remarks on foul brood in view of the editorial desire to close the discussion. But, I think I will not be transgressing if I simply state that in view of Mr. Loveday's very hard case I will not oppose any legislation likely to be really effective in stamping out foul brood. I may also remark that if your readers would cultivate a judicial frame of mind they could discuss this or any other matter till Doomsday without falling out over it. For my part, I have not let personal feelings enter into the case at all. I have stuck to the subject and have none but the best of feelings towards all who have taken part in the discussion. I like a good strong opponent; then all the points on both sides are well brought out and everyone is informed.—W. J. Farmer, Redruth, June 10.

BEES IN LANCASHIRE.

[5920.] As a subscriber to your journal, I should like to call your attention to the following:—On Saturday, May 13, I examined my hives, and found one of them particularly strong (drones had hatched out), and every one of them (ten standard frames) crowded with bees. I put on a super, containing ten drawn-out shallow-combs; and on May 28, seeing drones out on the alighting-board, I removed the quilts, and found that every cell had been filled with honey of a clear, dark colour. Surely this is quick work for this time of the year? The chief source from which the bees have obtained this honey is, I think, from some gorse about a quarter of a mile away, apple blossom, and latterly the sycamore trees, which have just begun to flower. I have mentioned this to several bee-keepers in the district, and they are all greatly surprised, the majority of them not having put on supers as yet, their stocks being rather weak.—I send name, etc., and sign—Anglo-Saxon, Bickerstaffe, near Ormskirk, Lancs.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

So much is written about hobbies for working men, that the following notes of our friend Mr. Oldfield should be taken to heart by those, who, like himself, seek for a pleasure giving home-hobby that needs no great outlay in order to combine both profit and pleasure. He says:—

"In complying with your request for a few 'notes' of my bee-keeping experiences to go in B.B.J. along with photo of my little apiary, I fear there is not much that will interest your readers, unless it helps to show that bees, if managed with ordinary intelligence backed up with some little study of the subject, can be made both profitable while affording a deal of genuine pleasure to their owners. Let me then say I began my bee-keeping with a second swarm or cast given me in July, 1900, at which time I knew nothing whatever about bees or of their management. They were hived in a straw skep, and after setting the hive in my garden, I thought they would be all right if left alone and protected from wet weather, etc. Luckily, however, before I had the bees many weeks I chanced to see the advertisement of a well-known bee-appliance maker in a weekly paper I was reading, and sent for his catalogue, in which there was some good 'advice to bee-keepers.' On reading this, I took the first chance of looking at my bees, and it was fortunate I did so, for there was only a little cluster of bees and comb in one part of the skep; the whole being so small that it would have gone into my hat. I started feeding without delay, giving the bees 25 lb. of sugar made into syrup. They made a good stock, wintered well, and yielded 43 lb. of honey the following year. I sold it all at 1s. per 1-lb. jar, and bought two more swarms in 1902, making a new start with frame-hives and modern methods. From the three hives I took 90 lb. of surplus-honey. I next bought an extractor and honey-ripener. My idea on taking to bees was to make a hobby of them, but it is easy to see they can be made to pay well also and yield a good deal of pleasure into the bargain. I think every working man who lives in a suitable place should keep a few hives on modern lines. It is not difficult to make one's own hives. Those seen in photo were made by myself on winter nights from used boxes, and by being a bit careful in making, while using machine-made standard frames, they do as well as the most expensive. Mine are made on the 'W.B.C.' plan with a little variation in the roofs, as seen. The appliances one has to buy do not cost much, and, as in my case, the bees will pay for these. I work for extracted honey only, using shallow-frames as surplus-chambers. I regret not having more room in my gar-

MR. J. H. OLDFIELD'S APIARY, THROAPHAM, ROTHERHAM, YORKS.

den, as it prevents me from going in for a good-sized apiary, as I could sell a great deal more honey than I can now produce.

"In conclusion, let me say, what little knowledge of the craft I have, has been got from the 'Guide Book,' along with your papers, the B.B.J. and *Record*, and I wish success to our papers, and a good season in 1905 to all bee-men."

Queries and Replies.

[3775.] *Ownership of Absconding Swarms.*—In order to make myself clear in asking your advice regarding the legal ownership of runaway swarms, I must ask you to suppose three places, which I will call A., B., and C., and that the distance between A. and B. is 150 yards—as the crow flies—across intervening gardens; while from A. to C. is about a quarter of a mile distance through the village near by. A. is our own place where I have kept bees for twenty years. B. is a garden occupied by a labourer, and C. is a garden where bees are also kept. After this preface I may say on Sunday morning about 10 a.m., I thought my bees would swarm that day. At 12.30 our under-gardener came to say there was a swarm clustered in garden B, just over the hedge from our property. I had to go round by the village in order to get to the spot indicated and on arriving found a swarm on an apple tree. The labourer who occupies the garden gave me free permission to take the swarm. There was no one else about in the village, except this labourer and another man, neither of them work for ourselves or for the owner of C. I took the swarm safely in a skep, and by 2 o'clock they were quite settled down, so I left them till 8 p.m., when they were carried to a stand in our garden (A.), where I have three hives. The bees of my hives had been hanging about all day, but I could not say for certain whether they had swarmed. Next morning I had to leave home at 8.30. It was bright and sunny, and my own three hives as well as the swarm were all working well and quietly. In the course of the morning, the gardener from C. came to claim the swarm. He said he had watched their bees till 12, and then left, but informed us that his mistress had heard the bees making a great noise as if swarming, shortly after her man had left. It was thus clear that no one in employ of those who claimed had followed the bees, or did anything to keep them in sight, until they were told that I had taken a swarm in the garden B. I therefore ask:—1. Have they any legal right to claim the swarm? From accounts I have received, there is a strong feeling that the swarm came from C., but I have always understood that no one can claim a swarm that settles in some one else's garden, unless the bees have been seen to leave the hive, and have never been lost sight of by the claimant or some one to represent him. In this way I suppose the swarm really belongs to the labouring occupant of the garden B., but he gave me leave to go into the garden to take it. What is your opinion on the point? Some years ago I lost a swarm, though my gardener saw the bees issue and followed them for 200 yards, when the runaways flew across the river to a garden a quarter of a mile away, so he could not keep up with it. I asked for the swarm within three hours, but they would not give it up. Now comes my second question:—One of my other hives is weak in bees, but they were carrying in pollen on Saturday and Sunday. I hear that on Tuesday a swarm came from the garden C., and the bees of their own free will entered the above-mentioned weak hive, and have comfortably settled therein. I suppose they cannot touch my hive or claim the bees?—R. G. H., Darlington, May 31.

Reply.—1. According to "Blackstone," the bees under the circumstances named were the lawful property of the labourer, who gave you permission to carry them off as yours, so that your neighbour C. has no claim to the swarm. 2. This is an altogether different case, and had the swarm entered an empty hive, you would have had no claim to the bees. But seeing that the swarm joined of themselves to one of your own stocked hives, no one can have any right to disturb the latter against your will, even if the bees could be parted, which, of course, they cannot. It would thus become simply a question of equity rather than "law," and from this point some compensation might be given either in cash, or, say, a second swarm or cast from one of your own hives, to settle the matter peaceably.

[3776.] *Mis-hiring My First Swarm.*—As a constant reader of B.B.J., I shall be greatly obliged for your advice on the following:—I commenced bee-keeping last year with one stock. During the winter I made a new hive, and had it all ready fitted with eight frames of foundation, watching for a swarm. The swarm came off to-day and settled on a close hedge near at hand in two clusters. I got one of the clusters into the hiving-skep without difficulty; but the other lot was so far into the hedge that I had some difficulty in securing the bees, but did eventually, and placed the skep on a board. In about an hour all the bees were in. I then carried the swarm to the new hive on a stand six feet away from the old one. I fixed a board covered with a sheet in front, just as in illustration seen

on page 26 of "Guide Book." I then emptied out some of the bees, which started to run into hive, but the bulk clustered over the entrance, where the whole swarm remained for about an hour, when I found they were flying back to the old hive. In a short time I found all had returned except about 200 bees, which I suppose went in at the first. Can you tell me what I did wrong? I carried out the instructions in "Guide Book," except that I did not raise front of hive. The reason for this was that my floor-board was made like Fig. 11 (page 35 in "Guide Book"), and between brood-chamber and outer-case I had fixed a strip of wood so that bees could not get between the two at entrance. This strip of wood is attached to floor-board to keep it in position, so that if I raised front of outer-case bees would have clustered up between the case and brood-chamber. Do you think the bees will soon swarm again? If so, what would you advise me to do to prevent them returning to old hive? Could I leave off the outer case and use only the brood-chamber until the bees are all in?—J. J. T., Great Wakering, Essex, June 4.

Reply.—It is a pity you did not fix up your hive for receiving the swarm as shown in the outline cut on page 23 of "Guide Book." The outer-case and hive-body is there seen wedged up in front 1½ in., so that the bees have a commodious entrance-way. The swarm seen on page 26 was thrown out with one jerk—not "a few at a time," as in your case—by the writer of these lines, and in less than ten minutes the bees were all in the hive. It seems certain either that the queen has met with some mishap, and was not thrown out in front of the hive at all, or else she was not secured in the skep when hiving the swarm. Your plan now will be to go to the parent hive after nightfall on the eighth day after swarming—viz., on the 11th inst.—and put your ear close against the hive. If "piping" is heard, it is certain that the old queen is lost, and the bees will swarm again probably on the following day. The bridge over entrance in your hive is a mistake if made a fixture as stated; you should make it loose.

[3777.] *A Novice's Queries.* — Please answer the following queries through the B.B.J.:—1. "Super-clearer." This appliance is mentioned in "Guide Book," but I, as a novice, can hardly see the necessity for same. Will not the bees leave super when latter is removed from hive, and how does it prevent robbing? 2. Can it be used on a hive with double walls on two sides only? Give necessary particulars for making. 3. What is a "honey-board"? Does it take the place of an excluder? Give particulars of construction, if not patented. 4. Are there any objections to using cork lino for quilts? 5. Would cattle or fowls do harm in an apiary? 6. Is there a bee-keepers' association in this county? If so, give name and address of secretary. 7. What are the objects of, and benefits to be derived from, such an association? I send name, etc., and sign—Neophyte, Beds, June 5.

Reply.—Your first batch of queries as a novice in bee-keeping is what may be called a rather "tall order," in the way of replies to same, and brevity may be excused in view of space alone. First, then, you will do well—as a novice—to take for granted that the "Guide Book" contains the practical experience of a bee-keeper not unknown in the bee-world, and there is no need to ask for the "why and wherefore" of the statements made therein. For the rest, we reply to questions as enumerated: 1. The super-clearer is one of the most useful appliances brought out for many years as an aid to clearing bees from supers, and effectually prevents robbing. 2. It fits any properly made hive. We cannot give particulars for making; besides, an amateur would only spoil it if he tried to make one. 3. A honey-board provides a bee-space below surplus-chambers; it is not patented. 4. No, but it is not a suitable material. 5. Yes, cattle, if not poultry, must be kept out of apiaries. 6. The hon. secretary of the Beds B.K.A. is Mr. C. N. White, Union House, St. Neots. 7. The hon. secretary is the person to apply to for particulars you need.

[3778.] *Transferring Bees with Cross-built Combs.*—A friend of mine has four very strong stocks of bees, each covering ten to twelve standard frames; but, unfortunately, the bees have built some of the combs across the frames. In fact, the frames are quite useless as they now are, and cannot be taken out without destroying a lot of young brood, etc., and tearing the combs. Will you, therefore, please say:—1. How the bees may be transferred into new hives fitted with full sheets of comb-foundation without destroying the brood in the old hives? and 2. Would it be possible to make more than four stock of them during the transferring? I send name and sign—Q. X., Suffolk, June 7.

Reply.—1. The task of cutting out and transferring cross-built combs and brood to a new hive is, in our opinion, beyond the powers of any but an experienced bee-keeper. Therefore, if body-boxes are loose, we should set them above the top-bars of new hives and allow the bees to transfer themselves to frames of foundation below. 2. This would still further increase the difficulties of a novice, and we should not advise you to attempt it.

[3779.] *How to Increase Stocks.*—I should like to try Mr. Alexander's plan—described by Mr. Hooker on page 202 of B.B.J. for May 25—of how to increase stocks, but have already got supers on all my strong hives. I therefore ask: Do you consider that the plan would work successfully immediately after the honey-flow has finished?—SALOPIA, Wellington, June 12.

REPLY.—The plan in question would be very liable to go wrong if deferred so late in the season as you propose. Queen rearing and successful mating in this country should be started in the summer time; if left till autumn, when honey gathering is over, and weather uncertain, the chances of success would be so much reduced as to make it hardly worth trying.

[3780.] *Preparing Swarms for Transit.*—Will you, or some brother bee-keeper, kindly tell me—giving the whole process—how to get a swarm of bees into the travelling-box for despatch?—F. R. H., Salisbury, June 9.

REPLY.—Assuming that you know how to make a proper swarm-box for transit, by rail or otherwise, it only needs to hive the bees in it just as in an ordinary hiving-skep. Also to make sure the queen enters the box and that the swarm is not so large as to over-fill the box and perhaps cause suffocation, the points to aim at are: 1. Making the box so secure that bees cannot possibly get out. 2. To provide ventilation on the journey. For the rest, those who send many swarms away have each their own plans, and we will be glad if any one of them will help our correspondent as desired.

[3781.] *Compulsory Removal of Bees as a Nuisance.*—My garden is some forty yards long and about fifty yards from the house, and at the top end of the garden I have several hives of bees. My neighbour has a garden running parallel with mine, the same length, my bees being at the extreme end from my neighbour's fence. A few days ago the aforesaid neighbour's children started throwing stones at my hives, and the next day he was himself stung by a bee while walking in his garden. He now threatens me with "law" unless I remove the hives, which he declares are a nuisance. I therefore ask: Can he compel me to get rid of my bees? A reply in B.B.J. will much oblige—J. B., Chasetow, June 7.

REPLY.—The point in question can only be decided by the County Court Judge who hears both sides of the case. But any bee-keeper of experience knows that bees become irascible and inclined to be vicious if stones or clods are thrown at the hive entrances. You would, therefore, need to prove that this was done by the children as stated. If no previous trouble has been caused by your bees, the damage done hardly seems a sufficient cause for compelling removal of the hives, if it can be proved that your neighbour's children were the primary cause of the alleged nuisance.

[3782.] *Dividing Stocks to Prevent Swarming.*—Many thanks for answer to my inquiry in to-day's B.B.J. (No. 3772). I rather expected reply in last week's, but a brother bee-keeper had asked exactly the same question as myself in last week's B.B.J. (3766, p. 218). I therefore acted according to the instructions you gave him, viz., placed a box of shallow-frames fitted with foundation under the skep. This I did last Saturday. On examining again this morning (Thursday) I was greatly surprised to find skep, shallow-frames, and brood-chamber crammed full of bees, and the combs in shallow-frames all drawn out. The combs in brood-chamber contain brood in every frame. I am particularly anxious that the bees shall not swarm, as they are located about half a mile from my home, and there are no bushes or trees near for them to cluster on. It seemed pretty evident that they would soon swarm if not prevented, so I acted as follows:—Having a new hive ready, containing eight frames fitted with full sheets of foundation, I took two frames of brood and bees from parent hive (making sure that queen was not on either one), and placed them in the new hive, filling up the space in full stock with the frames of foundation. I next took the skep, and placed this over the frames of new hive. The skep contained a fair amount of brood, and two queen-cells, both the latter being empty. Is it possible for the bees to rear a queen or must I buy one? Please answer in next issue of B.B.J. I send name and sign—A. B. GINNER, Tring, June 8.

P.S.—I do not possess the "Guide Book," but have ordered one to-day.

REPLY.—If you made sure that there were eggs or very young larvæ (not over three days old) in frames removed to the new hive, the bees will be almost certain to raise a queen therefrom. But we cannot pronounce definitely with regard to the future welfare of the new hive or of the parent colony, as you unfortunately omit to say how the respective hives are now placed with regard to the original location on which the parent hive stood. As all the flying bees will return to the old spot, whichever hive stands thereon will be safe and strong in bees, but if the other is removed some four or five yards

away, it will be in danger from losing all but the very young bees left in it at time of removal. On the other hand, if you thought of this and acted accordingly, all will probably go on well. As you now possess the "Guide Book," refer to chapter on artificial swarming, which will help you to understand this part of your procedure.

Echoes from the Hives.

Crewton, Derby, June 9.—Stocks in this part of the country are fairly strong now, and, if plenty of rain comes down for a day or two, bees will be busy working the clover, which looks well so far. The fields around here are very dry, the soil being of a light nature, and without some rain soon we shall most likely be landed in the same predicament as last year. My own bees have gathered very little surplus yet, owing to the cold north-east winds stopping all foraging abroad. The unseasonable weather this spring has also caused swarms to be rather scarce. There has been a good show of hawthorn bloom, and bees made the best of it. Providing we get some rain, I think it will be a fairly good outlook for honey.—W. H.

Thurstaston, Cheshire, June 11.—By the "Echo" from Higher Bebington in last week's B.B.J., I see that you consider it exceptionally early for supers to be nearing completion in this part of the country. I therefore thought it might interest you to hear that three of my four stocks are at work in the supers. My strongest hive was given a rack of sections, and the bees took to them on May 28. I examined them on June 8. I found several of the sections almost fully sealed, and a good quantity of honey in the others. I gave them a box of shallow-frames beneath sections the next day. So far, the season round here is full of promise, which we must hope will be fulfilled in the near future.—G. S.

Tarvin, Cheshire, June 12.—Whitsuntide holidays are now at hand, and the delightful sunshine will bring brightness and joy to thousands. Brother and sister bee-keepers will also have their share, and will probably take the opportunity of examining their hives and find the gratifying result of sealed or partly-sealed supers of honey. I am glad to report that on June 7 I took off a complete rack of sections in a well-situated apiary in North Wales.—Jas. Waddell, Expert (on tour for C.B.K.A.).

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. **Entries closed.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. **Entries closed.**

July 19, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 12.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Bee-keepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. **Entries close August 9.** Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts.

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections.

Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

Notices to Correspondents & Inquirers.

J. T. (Staffs).—Examination for First-class Certificates of B.B.K.A.—1. The first-class examination consists of three or four hours' paper work, and includes sketching, by candidates, diagrams illustrating the anatomy of the bee. A thorough knowledge of scientific works is therefore necessary. It also includes a short impromptu lecture on a given subject, delivered before the examiners. 2. A list of books obtainable from this office appears in current issue of B.B.J., also in advertisement pages of "Guide Book." 3. We supply a few back numbers of B.B.J. and *Record* free for distribution by lecturers on payment of postage.

S. W. Walden (Surrey).—Bee-forage.—Of the three sprigs of bloom sent, Nos. 1 and 3 are useful for bees, and No. 2 is not. No. 1 is the common trefoil; it yields honey, and bees work on it very well in good weather. No. 3 is the broom, and bees gather pollen and a little honey from it. No. 2 is allied to the common nettle and is useless to bees.

J. B. (Stockport). — Bee-nomenclature.—The largest bee of those sent is a queen, and, from her appearance, unmated. The bees sent are of the ordinary brown variety.

A. S. H. (Cirencester).—Foul-brood Preventives.—Neither of the disinfectants you name is a cure for foul brood; they only prevent the growth—or increase—of the bacilli, but have no effect whatever when the disease has reached the spore stage.

A. H. Marett (Wilts). — Parasites on Humble Bee.—We are not conversant with the parasites found on the bumble bee, but those on specimen sent bear no resemblance to the *Braula cæca* or blind louse seen at times on the hive bee.

Beginner (Beds).—Feared Loss of Queen. —The bee sent is not a queen at all. It is a drone, and the peculiar appearance shows that it had shared in the process of mating.

C. J. G. G. (Long Stratton).—The queen sent was all right, and not to blame for disease in the hive. It must have come from other sources.

A New Beginner (Mexboro'). — Using Combs in which Bees Have Died.—If there are no dead bees in combs save those you were "able to pick out of the cells with a pin," as stated, we think you might safely use the combs again. It seems clear that the bees of both stocks in question have died from want of food.

Suspected Combs.

Apis (Enfield).—Comb sent is badly affected with foul brood, and, in view of your "strong, healthy stocks," close by, we advise total destruction of the diseased colony, with the contents of hive, and thorough disinfection of the latter before using again.

Epps (Atherstone).—Foul brood is developing in comb. Your best course, under the circumstances, will be to get bees off combs and deal with them as directed in "Guide Book" (page 152). The present is a favourable time for the plan there given.

Donard (Co. Down).—The full standard frame of new comb sent—with sealed and unsealed larvæ in all stages of development—shows a bad case of virulent foul brood, every dead larva in sealed cells being absolutely rotten with disease. We strongly advise you to examine the second suspected stock, and if found in similar condition to the one in question burn both lots to prevent risk to your other hives. We should think the two stocks must have been robbing a badly-diseased stock last autumn, to have brought about the present condition of your affected colonies.

Doubtful (Devon).—Your sample shows a bad case of foul brood, the disease being of old standing.

C. T. J. (Pontypridd).—Your friend had better destroy the combs now in empty hive. The bees must have died out from disease, as shown in sample of comb sent.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

AMERICAN ENTERPRISE

IN THE INTEREST OF APICULTURE.

We have been favoured with a call and a pleasant interview with Mr. Frank Benton, Apicultural Investigator, U.S. Department of Agriculture, who, in his official capacity, has undertaken a journey extending more than half round the world in search of foreign bees and honey-producing plants. It came as an agreeable change from our ordinary editorial work to spend a few hours with so fully-informed and widely-travelled a bee specialist as our visitor. Few men have had such a long and varied practical experience with foreign bees in their own habitats as Mr. Benton, who seems eminently fitted for the task entrusted to him. Fully impressed with the importance of his mission, he was frank and willing to a degree in conveying to us—and through us to our readers—what his journey really meant, and this will be realised when we say that, after a very few days' stay in England he goes through France, Germany, Switzerland, Italy, Austria, and to Turkey; then leaves Constantinople for the Caucasus, thence across the Caspian Sea and by rail on to Bokhara, and, if possible, through Afghanistan by caravan to Punjaub, in India, and finally from Calcutta to the Philippine Islands.

The specific object of his errand is, among other things, to obtain a good supply of Caucasian queens of a particular strain, which has been tried in the experimental apiary of the Government apiary at Washington by Mr. Benton himself with gratifying results. He also hopes to be able to do something towards deciding the usefulness, or otherwise, of the giant bees of India, *Apis dorsata*, and other species of this genera, known as *Megapis dorsata*, *M. zonata*, etc.

With all this before him, we heartily wish for Mr. Benton's success, and if the desired object is secured, as we trust it will be, British bee-keepers will no doubt in some degree at least benefit from his labours, because, should the particular strain of Caucasian bees mentioned maintain the extremely docile and prolific character of those already tried at Washington, we shall hope to see them introduced into this country for the general good of the craft. In any case, we shall hope to hear from our good friend occasionally as time passes, and that he may return safely from his journey will be the wish of all readers along with ourselves.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

HOW TO CHECK SWARMING.

[5921.] Bee-keepers have been devising innumerable plans for securing this important object. Many are failures, but many are at least aids, and, properly applied and intelligently carried out, they go far to minimise the ill effects of a break up of forces just at the critical time. Most are too well known to readers to require reproduction, so I will be content with giving two about which little has been written, although they have been practised in Scotland for nearly twenty years at least.

The first plan requires two hives, and is almost an exact replica of the practice now so common of hiving the swarm on the home-stand and shifting the parent hive alongside of it, standing it almost at right angles to the old position, but gradually altering its frontage until it is in line with the new hive. Then some fine day it is shifted to the other side, thus giving the swarm on original stand the full force of the foraging bees coming home from the fields laden with pollen and nectar. Generally, after some days this hive is shifted away to some corner of the garden apart, to work up into a stock for next season. Now the new system I advocate in no way differs from the foregoing save that the bee-keeper does not wait for natural swarming with its attendant dangers of decamping, but he himself swarms it at his pleasure, giving the swarm most of the bees, all the adult field-bees and the supers if these are on. He may give the new lot combs if on hand, or give them frames filled with wired foundation, just as he finds most convenient. The old hive is shifted alongside, and treated afterwards as mentioned above. The chief drawback throughout in making these movements is that a great part of the brood will be almost inevitably lost by chill owing to the paucity of bees, especially if a fall of temperature occurs after the change is made. To obviate this loss and secure that the bees will work right on I would advise a plan largely practised

in Scotland, but lately revived as if it were a new invention.

Take a hive of the "W.B.C." type, and prepare a body-box made up as a duplicate of the original body. Hunt up the frame with queen, and transfer it to the centre of this new body-box, replacing it by the frame of foundation which has been removed to give it room. Place this new hive on the floor-board, cover it up with queen excluder zinc, and then return the old body-box above. You will thus have a nearly empty body-box below, which will tax the bees' energies for a good few days to fill, while the original box will be one mass of bees and eggs. The latter will have special attention from the bees, and soon they will have all brood capped and beyond danger of a chill. In about ten days from date of doubling, or later, according to circumstances and objects aimed at, either of two alternative methods may be practised, depending on whether increase is desired or not.

If increase is the chief aim the top body-box may be carried away to a corner of the garden some distance away, and at once planted down there. Or it may be placed alongside of the original stand for some time to supply more of its field-bees before being thus shifted apart. In either case the body-box on original stand has a grand lot of bees well able to fill supers with a good honey-flow on. The other may be supplied with a nearly ripe cell, a virgin queen, or a mated one, some twenty-four hours after separation, so that as little time as possible may be lost in developing it into a strong stock.

If, on the contrary, increase is not desired the top body-box may be removed, and extra supers can take its place. It may, however, be left, and the combs extracted when full, after which they will be a valuable asset in any apiary. In most cases they will be left on only long enough to enable all brood to hatch out, somewhat the same as is practised in the Rymer plan. You have thus very large forces, especially for later flows, all the time using only one hive, and by concentrating your forces there will be no loss from chilled brood, while you save yourself all shifting of hives. The advantages of this almost automatic plan will be manifest to all, because it saves watching for swarms, returning of same if they come off, saves valuable time by keeping the bees constantly employed, and gets over the dread so common with many that swarms will be lost. At an out-apiary it is—timely taken—almost as good as employing a watcher. Care, however, must be observed not to start the operation at too early a date, as then the new body-box will be left severely alone, and the queen's labours may be thus interrupted. Great care must also be taken to carry it out in time just before bees get the swarming fever, as then any amount of room may not serve to allay it.

Either plan, where increase is not specially desired, has the added advantage that the combs of extra hive-body, in whole or in part, may be temporarily turned into a nucleus lot to rear and fertilise a young queen. Here in the north the old queen may be deposed before the opening of the heather-flow, or after, and this nucleus lot with the young queen at its head may be joined on to the main hive. Many good bee-keepers believe in this operation of requeening being carried out before the heather harvest opens, but I have a leaning myself in favour of deferring this deposition of the old queen until the heaviest flow is over. I could give many good and valid reasons in favour of delay, although I believe they might run counter to common beliefs and practices.—D. M. M., Banff.

BUYING DRIVEN BEES,

AND RISKS OF GETTING FOUL BROOD.

[5922.] The remarks of Mr. W. Woodley in "Notes by the Way" last week on the subject of buying driven bees appear to me to call for some reply, as being not only exaggerated, but in direct contradiction of actual facts. Reading between the lines of Mr. W.'s "notes," I gather that he has never soiled his hands with driven bees, and, therefore, has had neither personal experience of them or any actual knowledge with regard to results of dealing in such bees. His adverse remarks are, in consequence, founded upon theory only. Now, Messrs. Editors, you have known me personally for a good few years, and I have sent away many hundred lots of driven bees in response to my advertisements in your columns to all parts of the United Kingdom, but I have never yet had to fill a single order from the South beyond the county of Surrey, so that, according to my experience, Southern bee-keepers can have no knowledge as to facts in the direction indicated by Mr. W.

On the other hand, I can claim to know something about skeps as well as of frame-hives, as an expert of the B.B.K.A., for I was a "skeppist of the old school" over forty years ago. Not only so, but visiting, as I have done, some fifty apiaries located in three different counties every year, I assert most emphatically that foul brood does not exist to any extent among the straw skeps coming under my notice. No, it is not the skeppist who is the big offender that harbours foul brood, but the indifferent careless bee-keeper who uses the modern frame-hive. I can give facts to

prove my assertion, and am prepared to do so if our Editors desire it.

I say, then, that foul brood is not spread abroad with driven bees, as Mr. Woodley states. During the past forty years I have never found skeps that I have driven affected with the disease save in one village some four years ago, and this was traced to an apiary in the valley where frame-hives were kept standing for ten years without being examined. The bees from this village I at once refused to "take" for the owners.

The numerous "repeat orders" that I have had from all parts of the North, including Scotland, in past years, while free from a single complaint that any bees sent by me have developed foul brood, shows that the alarmist views of Mr. Woodley are without foundation, and he has no right to charge other men—as well-meaning, honest, and upright, may be, as himself—with indiscriminate driving of bees, both healthy and diseased, and offering the same for sale. Such remarks are calculated to do harm to other members of the craft who, like himself, are endeavouring honestly to add to their incomes by dealing in driven bees as he does with swarms.

I withhold my name, as my letter might be read in the light of a free advertisement, but send it on for reference, and sign—THIRD-CLASS EXPERT, B.B.K.A., June 19.

A SWARMING INCIDENT.

[5923.] Yesterday, in the late afternoon, I was asked to see to the hiving of a swarm, which had issued, between 3 and 4 p.m., from the stock in the garden of a friend who lives near my house. I got the bees—rather a small lot—safely into a skep, and they so speedily settled in that I determined to re-unite them forthwith with the parent stock. On going to the latter, to make preparations, I was greatly surprised to find *many hundreds* of recently-killed bees lying within a few square yards on one side of the stand. I threw down the swarm in the orthodox manner in front of the hive, and there was an immediate in-rush. I watched for the queen and removed her. The bees continued their re-entry without any appearance of agitation, and this morning the stock is in a normal condition, without any sign of further fighting, and working well. Why any battle should have taken place puzzles me. The smallness of the swarm when settled may be accounted for by the absence of the slain hosts. But how and why were these killed? I can conceive of no reason for the inmates of the same hive indulging in mutual slaughter. Robbing at this time of year—especially as, in this case, there is only one stock, and that a very strong one—is surely most unusual. Moreover, there was no sign of fighting about the entrance to the hive, nor were any dead bees just below it. Can you account for the incident? Could a vagrant swarm have encountered the one as it issued from my friend's hive, and a battle then have ensued? In a long experience I have known nothing similar to the circumstances related.

In illustration of the promising nature of the season, I may mention that on June 9 I took a crate of well-filled sections. On my five stocks the bees are now working in eighty-four sections and forty shallow-frames. The honey appears to be good in colour. W. H. HARRIS, Hayes End, Middlesex, June 15.

[Presupposing that the "very strong stock" really sent out a swarm on the 14th, we have never experienced, or even heard of, an incident like the above; but we cannot think that the dead bees belonged to the hive that swarmed, nor do we think it was a case of "robbing." We rather incline to concur in your view that a vagrant swarm has been involved in the incident, in which case the slain bees would belong to the latter.—EDS.]

RECOVERING A TRUANT SWARM.

A LADY BEE-KEEPER'S EXPERIENCE.

[5924.] You very kindly gave me some good advice in your valuable paper last week about one of my hives of bees, and I am writing to-day to tell you how successfully I recovered what, I suppose, was a "cast" from one of my stocks. I have felt afraid that on Sunday, the 4th, I lost a swarm; so on the mornings of the 13th and 14th (nine and ten days after) I watched the stock in question, until at 4.30 on the 14th I could watch no longer, having visitors to entertain. Not long afterwards, a woman, who lives in a cottage about a mile off, came to say a swarm of my bees had come to her garden and had clustered on a currant bush. I told her I could not go then, but gave her a skep, as she thought a neighbour would hive them. On thinking it over, however, I sent a message telling them not to touch the bees, as they might get stung in trying to hive the swarm. The day was hot, and the up-hill mile walk not encouraging, so I partly decided to give them up. Still, all the evening I kept thinking of the swarm, and at last, when just getting dusk, I felt I must go, and off I started alone. I found the farmer and his wife in the garden, both anxious to help me take them. I found afterwards their anxiety was evidently fear that I should leave the swarm in their garden. So I got the bees in the skep and

carried them home between 10 and 11 o'clock, put the bees in the garden close to the hives, and at 3.30 this morning got up and successfully hived them. I did not, however, see the queen, but it was a very large lot, and I am so very glad I ventured to get them. I stayed till the last bee went in, which was 5.30; the morning a lovely, warm June one. I enjoyed it all very much, and felt so happy to get my bees back again. I hope they will settle down now. This is the second swarm I have taken quite by myself. The first one I put into a new hive. This last one I did as you advised me and returned it to the parent hive. — E. M. M., St. Asaph, June 15.

ERRATIC SWARMING.

[5925.] On June 14, at 9.30, I had a swarm of bees from a straw skep, which was hived in the usual way. At about three o'clock, however, the bees left the skep and clustered again. Having, at the first hiving, put them in a last year's skep, from which I drove the bees and took the honey, I thought perhaps they objected to it, although it had been well cleaned out and sprayed with salicylic acid solution; this had a three-inch hole at top covered with perforated zinc.

I, therefore, used a new skep when hiving them again, and the latter had also been sprayed with the solution. The new skep also had a three-inch hole in top covered with perforated zinc. But on the morning of the 16th inst., the bees all came out again, flew round in the air for five or six minutes, and then returned to the parent skep. Being puzzled at all this, I thought perhaps the perforated zinc had something to do with it, so I took this off and made a circular plug of wood, which I fitted in the hole, thinking the bees could make a better start at comb-building on this than on the zinc; but during the afternoon of the same day, they swarmed out again and settled on the same spot as they did on deserting the skep the second time. The thought then occurred to me that the queen had possibly been lost, so I examined the now-empty skep. I found that the bees had built a piece of comb almost as large as one's hand at one side, which, on examining, was found to contain pollen and honey, and a few eggs. I was, therefore, under the impression that all was right. I then got a new skep without any hole in top, rehived the bees in it, and placed them on the stand. But it seemed to be all of no use, for on the afternoon of the 17th inst., they again left this skep, flew round as before for a few minutes, and returned to the parent hive again. After watching them for some time, I found they acted as described in Mr. Cowan's "Guide Book" (page 119). To-day (Monday, 19th), I find the bees are more quiet and are taking in pollen in small quantities.

I am sending you the piece of comb, I took out of the second skep, containing the eggs. I should be much obliged if you would give me the reason for the bees acting in the manner they have done; also whether the eggs in comb have been laid by a queen or worker-bee. If the latter, what is best to be done under the circumstances?

My bees seem to be doing very well. I have six frame-hives, with two racks of sections on each, the top ones of which are nearly all ready to take off. Thanking you in anticipation, I send name for reference and sign — W. J. M. S., Ashford, Kent, June 19.

[1. It cannot be loss of queen that caused the swarm to refuse to remain in hiving-skep; we therefore, conclude that the bees returned to parent hive on each occasion because of not being accompanied by the parent queen. This is proved by eggs being found in new comb built in the hiving-skep. 2. It is impossible to differentiate between eggs laid by a queen and those of a fertile worker without tedious microscopical examination, which is needless in your case.—EDS.]

ODDS AND ENDS ABOUT BEES, ETC.

[5926.] Half the pleasure in bee-keeping consists in the keeper making his own hives and many of the appliances necessary for modern bee-keeping. How proudly we inform our friends and visitors that such and such a hive is of our making—all out of our own head—and if anything may be inferred from our pose of admiration it is that "our" home-made hive *takes* the cake. I knew a good lady whose dressmaker could never satisfy her exacting taste; but she herself eventually took to dressmaking in her spare hours, and every article now looks well! *Does it not?* I do not mean to be sarcastic, or to disparage the making of hives in our spare hours. I should rather encourage it, but always, as is continually pointed out in the "Guide Book" and B.B.J., to accurate measure within. I find some employ local joiners to make such, under the impression that they can be got cheaper. I have come across many externally well-made hives, but the internal arrangements so badly made that the standard-bar frames touch the sides and bottoms of the body-boxes.

Bee House or Workshop.—Nearly every town or village joiner has a store of old flooring, etc., which can be procured for a trifling sum, and by careful selections a very respectable bee house or workshop, 8 ft. by 6 ft. or so, can be made for less

(*Continued on page* 246.)

HOMES OF THE HONEY BEE.

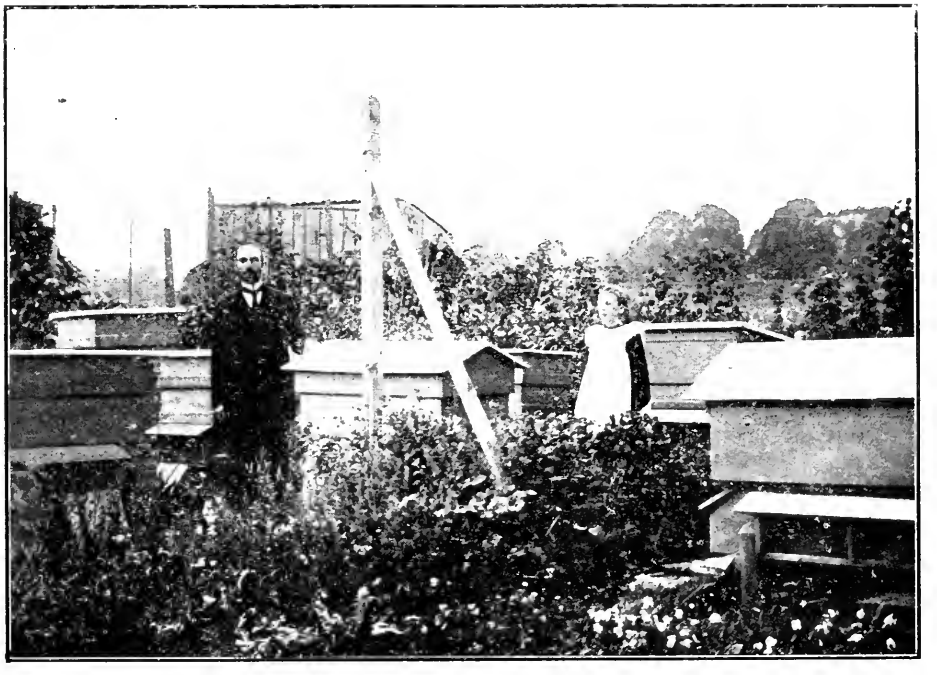
THE APIARIES OF OUR READERS.

Mr. Icingbell, whose apiary is seen below, sends the following interesting notes at our request. He says:—

"My first recollection of bee-keeping was when, as a small boy, I used to be packed off early to bed at the annual 'taking-up time,' which was considered an important event in our household, and meant putting the poor bees down into the sulphur pit.

"In the year 1892 it chanced that I saw in a local shop window a back number of the B.B.J., and bought it, never having heard that there was a bee-journal before. I read it all through more than once, and found, to my surprise, that my good wife knew something about bees, as, when quite a girl, she used to hive swarms for her aged grandmother, and did it with bare arms and face uncovered. Finding bees a subject of mutual interest, we talked about them till we got the bee-fever, I think. But my early recollections of them were not so pleasant as those of my better half, who declared they would never sting if treated properly. Moreover, she said, if her grandmother made them pay with skeps, we should do better with modern hives. So we decided to make a start in real earnest. I ordered the BEE JOURNAL and your monthly *Record*, and also bought the 'Guide Book,' which latter I know almost off by heart. Then a stock of bees was secured, my stepson and self carrying it nine miles slung on an ash-pole.

"All went well and we got on nicely with our bee-keeping. I built all my own hives. They are of various sizes, mostly long ones on the combination plan, but they all take the standard frame and have zinc-covered roofs. If I were starting anew, however, I would have all my hives on the 'W.B.C.' plan, and uniform in size throughout, so that all parts would be interchangeable. I also tried the double, or 'Wells,' hive, holding two stocks, after reading Mr. Wells's book. I find them do very well with me when worked with shallow-frames for extracting; but I have not tried them with sections. With regard to honey and marketing it, I have most demand for extracted, for which I charge 8d. per lb., and am always able to sell out one season's crop before another comes in. I do not believe in rushing my crop on the market at any price, but try to supply my customers' wants all the year round.



MR. H. T. ICINGBELL'S APIARY, CHEDDON FITZPAINE, TAUNTON, SOMERSET.

"I have been an outdoor employé of a co-operative society for the past nine years, and my time is fully taken up with the work, so that I cannot do much for the craft, but am always glad to tell all I know to any one wishing to start bee-keeping who comes my way.

"The bee-garden seen in photo is close to a main road, about two miles east of

Taunton, and many passers-by drop in to have a chat about bees on summer evenings, when the busy workers can be seen filling the supers, as I keep a sheet of glass on top-bars beneath the warm coverings. In this way one can drop seeds by the wayside that may spring up some day. To the beginner I would therefore say:—'Do not try to run before you can walk; get well acquainted with Mr. Cowan's "Guide Book," and work according to its teachings without trying to "improve" on same. Also do not expect too much at the start, remember the proverb about "making haste slowly," and you will find bee-keeping pay well.' The bees have well repaid me for the trouble bestowed on them, and I shall be very sorry indeed if compelled to give them up. I used to keep as many as seventeen stocks, but the number is now reduced to twelve, owing to the death in January last of my good wife at the early age of 42 years. She was not only a genuine lover of bees, but a real bee-man's helper, doing all the work of preparing the honey for marketing, etc. She used to enjoy very much reading the interesting articles of your former correspondent 'Lordswood,' and when things went a bit wrong with the bees, she would soon smooth over the trouble and set things right, so that you may know how she is missed in the apiary as in the home. The two figures seen in photo are my eldest girl, aged twelve, and myself. She is very helpful to me in the bee-work, and the younger of my two children, aged eight, also helps all she can; but our mainstay has gone, and I am afraid I shall have to give up the bees for lack of time to attend properly to them; but I will not do this unless compelled."

("*Odds and Ends About Bees, &c.*," *continued from page* 244.)

than one pound. Such a house in the corner of the garden, with a joiner's bench in it 6 ft. to 8 ft. long, costing a few shillings (mine cost 5s.), serves as a den or retreat from the cares of the world and the distractions of paternal duties. I am, of course, expecting under these prices that each puts up his own house and bench. The happiness that is derivable from that house and bench cannot be measured by any sum in £ s. d. I would not, however, draw particular attention to the house, less the same dubious compliment be paid as was to me. A friend asked: "Who put up your bee house?" "I made it myself," I answered. "I thought so," replied he.

Leaking Roofs. — Many thanks to "F. J. H." for his hints on waterproof covering. By using his instructions a very simple, effective roof can be easily made.

Drones above Excluders.—If let in accidentally, these drones will fly out if the edge of the top quilt be lifted on a fine day or evening. If brood-combs containing drones have to be placed above the excluder, it is best to let them out as suggested above, every second or third day.

Simple Nucleus Feeder.—An ordinary cone-shaped oil "poury," such as used for sewing machines—3d. each—serves very well. Thrust the tapered point through a puncture in the quilt. Being 2½ in. long, it reaches down to the middle of the cluster of bees.

In conclusion, let me say, a pair of watchmaker's tweezers (cost 1s.) are very useful for picking out chilled brood. The keen, frosty nights in the last week of April and first week of May played havoc with the outside fringes of the brood-nest. A few minutes with these tweezers saves the bees a great amount of labour. Starved bees may also be removed quickly by the same means.—D. V., Dunaskin, June 17.

Queries and Replies.

[3783.] *Unfounded Alarm as to Foul Brood.*—I send a piece of comb for examination, as I fear it looks like foul brood. I may say that it was in a "Wells" hive, one portion of which has died out for two winters running, and as I was thinking of breaking it up for nuclei, and have ordered three queens for same, before seeing the comb sent. Would you therefore kindly let me know as early as possible, as it would be a pity to form nuclei from it if it is foul brood?—H. H., Haddingtonshire.

REPLY.—There is no disease in comb; nothing worse than granulated honey, as will be seen if you probe the sunken cappings of sealed cells.

[3784.] *Returning Second Swarms.* — In your reply to a lady bee-keeper (3768, page 227), you say "return bees to the parent hive following morning, before 6." Will you please tell me whether the queen of cast—or second swarm—must be first destroyed, or if the swarm can be returned just as it is hived in skep? I had a large swarm today, and do not wish for another from that hive, as they are working well. Thanking you in anticipation, I send name and sign — LADY BEE-KEEPER, Harpenden, June 12.

REPLY.—No need to destroy queen when returning swarm; the bees will settle that matter for themselves, and the "fittest" usually survives.

[3785.] *Transferring Bees to Frame-hives.* —In April I placed a very strong skep of bees on a "W. B. C." hive as directed in

"Guide Book." I now find that the bees have all worked down into lower hive. I therefore ask: 1. Shall I be doing right in putting on a box of shallow-frames, and again placing the skep on top? Your reply will oblige.—NOVICE, Bath.

REPLY.—If the skep is now entirely free from brood we advise its removal and driving out the bees, so that the whole strength of the colony bees may be free to store surplus in the shallow-frames. You may, if preferred, use a super clearer between skep and shallow-frame box in order to avoid the trouble of driving. In any case, however, do not omit putting a queen-excluder between lower hive and surplus-chamber to keep the queen below.

[3786.] *Sparrows and Bees.*—Last summer I noticed the sparrows taking my bees to feed their young, and this year they are again doing the same thing, and there are more sparrows. In B.B.J. for April 27, Mr. Davies writes (on page 166) of house-sparrows catching and carrying off early drones on the wing near hive entrance. I cannot get close enough to see for myself, but if they do the same with worker-bees I shall declare war on the sparrows, for one Sunday they carried off about thirty bees in as many minutes. I therefore ask:—1. Can you tell me about this? And also please say—2. Is there a B.K. association for Herts, and, if so, who the secretary is?—L. T., King's Langley, Herts.

REPLY.—1. We are not aware that the sparrow has any particular preference for drones more than for worker bees, but that when food for their young is scarce in spring they will take either kind of bee. 2. There is now no B.K.A. for Herts, though a very strong one flourished in the county a few years ago.

[3787.] *Dealing with Foul Brood.*—I am sending you a piece of comb from a hive of bees given to a friend whom I am assisting to start in bee-keeping. It looks to me very suspicious, and nearly all combs presented much the same appearance. A fortnight ago the stock came under my temporary care for cleaning from moths, etc., and replacing combs. I put in a couple of split naphthaline balls at once, and that or the subsequent fine weather has caused nearly all traces of supposed foul brood to disappear, thus giving me the hope that it was only chilled brood caused by the recent cold weather. I shall, however, be much obliged to have your kind diagnosis. I have had the pleasure of assisting three different parties to start bee-keeping this season, and have been more busy with others' bees than with my own so far; but I find so many people too indifferent to the wax-moth and other bee-enemies that I feel no surprise at the presence of foul brood in so many apiaries, and so, in self-preservation, I help them all I can.—H. O. M., Bristol, May 29.

P.S.—I have a large number of back numbers of B.B.J. that I shall be pleased to send to any deserving cottager I could hear of wishing for same.

REPLY.—The sample sent reveals a very bad case of foul brood of old standing, and the fact of all combs in the hive being in similar condition makes it clear that the stock should be destroyed outright, along with the contents of the hive, without delay.

[3788.] *Bees Swarming when Examining Hive.—Foul Brood Queries.*—1. Wanting to get some queen-cells a few days ago, I gave a few puffs of smoke at the entrance and over the back frames of a strong stock when commencing work. On the third frame I saw for a moment a queen-bee (a young one, I think). The quilts were only partly removed, and while I was uncovering the fourth frame the bees suddenly swarmed out from the open top and clustered not far away. I returned the swarm at once, but only after doing this three times did I manage to induce them to remain in their old home. I have never had an instance of swarming like this before. 1. Can you say why it happened? 2. Are good empty combs, taken from a stock which was found afterwards to have foul brood rather badly, capable of being completely disinfected by spraying with phenyle solution stronger than No. 8 recipe in the "Guide Book"? I washed some frames twice, and placed them out of doors three days. They seem to have no scent of phenyle. 3. Would they cause foul brood? 4. Can anything be done to disinfect the site of a stock destroyed for bad foul brood? I do not like to place a new stock there, fearing bad results. 5. Is it better, and safer to neighbouring bees, to destroy a stock that is strong in numbers, but has foul brood scattered here and there over the brood-combs—two or three cells in one place and the same in another, but not thick anywhere? It seems strong enough for supering. This stock, being at the end of a row, may be moved further away from others. 6. Another had, so far as I could see by careful examination, no diseased sealed brood; but three larvæ, near together, were dead in their cells. The rest of the hive looked very well, and the stock is strong. Do these dead larvæ point to foul brood beginning? 7. Can felt coverings from infected stocks be perfectly disinfected in strong phenyle, with, say, twenty-four hours' immersion? 8. Is it any use to treat diseased cells, when only a few, with phenyle or carbolic acid? I have seen such treatment.—B., Lines., June 6.

REPLY.—1. We have ourselves had Car-

niolan bees swarm while giving surplus-chambers without moving frames at all; but never in all our experience did our native bees act so. 2. You will find it distinctly stated on page 148 of "Guide Book" that antiseptics—including phenyle—and all others, while checking the growth of the bacilli, have no effect whatever on foul brood in the spore stage. 3. We never advise using frames again that have had foul brood in combs. New frames are so cheap that old ones should be burnt. 4. Trenching the ground a foot deep is a fairly safe measure to take. 5. The only "safe" preventive of risk to neighbouring hives is total destruction of affected stocks. 6. It is quite a common thing for stocks slightly diseased to yield a good harvest while suffering from the pest. These points can only be properly judged on the spot. 7. Yes. 8. Yes, in slight cases a cure has been often effected by spraying with "soluble phenyle"; but not with carbolic acid, the latter being unsuitable for spraying combs.

[3789.] *Clipping Queens.—Smoke v. Carbolised Cloth for Removing Sections.* — 1. Has it a harmful effect on queens to clip their wings? I ask because of desiring to do this in order to prevent loss of swarms, having two very strong stocks located at the heather seven miles away from home, and which I am working for sections. This makes it awkward for me to take a long journey two or three times a week, so that I should in all probability lose the swarms if they came off. 2. The other day a friend asked me to look at his bees. I found one lot—covering four frames—queenless, and headed by a fertile worker. I therefore promptly united the bees to another colony. I wondered, however, if the queenless lot would have raised a queen had a comb containing eggs been given them from another stock. What is your opinion? I have never seen the question asked before. 3. Will it damage sections if I use a carbolised cloth to drive bees down when removing sections as filled without waiting till the whole rack is completed? I understand that smoke taints them if used too freely. 4. I send a sprig of heather and ask if you will name it; also say if it is the best kind for honey? I send name for reference, and sign—QUERIES, King's Heath, Birmingham, June 9.

REPLY. — 1. The process known as "clipping queens" means removal of the greater part of one wing only, so that when the queen issues from the hive with a swarm, she falls to the ground unable to fly. It is probably no more harmful than the loss of a limb to a human being; but we cannot regard it as other than a rather cruel practice. In your case, however, it would fail to serve the intended purpose, unless someone was near at hand to secure the queen and hive the swarm soon after the latter issued. If this was not attended to for several days you would probably find the poor maimed queen on the ground, close to the hive, surrounded by a few bees, all dead through cold and want of food. 2. If the stock in question had been long queenless, you may be sure that the bees would make no attempt to requeen from eggs given. 3. Neither smoke nor the carbolised cloth will "taint" sections if carefully used, but, judging by the experience of judges at shows, the risk of "tainting" is ten times greater from the use of carbolic acid than from smoke. 4. The sprig of heather sent is the true ling—*Erica* (or *Calluna*) *vulgaris*. It usually begins to bloom the first or second week in August.

[3790.] *Queen-rearing. — Bees Removing Eggs from Queen Cells.*—Can you kindly tell me how it is that bees, with me, always clean out the eggs from the cells, when given them for queen rearing (*vide* "Guide Book")? I can get the cells started right enough, but not an egg is there left in them. I tried last year with the same result, and I have now two queenless stocks that I am trying to get to rear queens; but the persistent way they have of building queen-cells and clearing all eggs out of them is frightfully annoying, to say the least of it. —F. C. P., Warminster, June 15.

REPLY.—We fear there is something wrong in your method of operating when bees destroy or "clear out" all eggs given them as stated. If the mouths of particular cells containing eggs are enlarged, as directed on page 124 of "Guide Book," the bees, as a rule, choose those cells for queen-rearing and begin transforming them into queen-cells when the eggs in them hatch out, or sooner at times.

Echoes from the Hives.

Shrewton, Wilts. — In the first week of May I examined my hives and found on stock (a fifteen-frame hive) with nine frames containing brood and eggs; ten-frame hives had eight, and two others seven frames in each, while most of the others had five only, with brood and eggs in all stages. This was over a month ago, and they have all been doing well since.

Streatham, June 12. — Bees have been doing very well this season around here, until this last week; but the plentiful rain is just the thing that was wanted for the clover now coming into bloom. I have two stocks, each with a rack of sections on, all of which are quite three-quarters full of honey. A curious thing happened to me

last month. One of my hives, on May 15, sent out a swarm which flew off and was lost. The bees, however, came back again two days later, but queenless. Then on the 27th, they swarmed again, but this time the bees were returned to the parent hive and they have settled down to work in the sections with much vigour.

TRADE CATALOGUES RECEIVED.

Geo. Rose, Great Charlotte Street, Liverpool.—This is, in its entirety, one of the largest catalogues of the kind we know of, and sufficiently warrants its being charged 3d. post free. Not only does it include a full list of everything a bee-keeper requires, but combines a still more complete and well-illustrated catalogue of all that is needed in the garden, whether for ornament or use. Nor is the poultry-fancier overlooked, all sorts of appliances in that line being described, illustrated, and priced. This last very useful feature is carried out all through the list, every item having its cost affixed. We also notice an instructive calendar of "Hints what to do from January to December with Bees and in Garden."

F. W. L. Sladen, Ripple Court Apiary, near Dover.—This exceedingly well-got-up and beautifully printed little list of "Bees and Queens for 1905" should be seen and read by all who require high-class queens or bees in their apiaries. Mr. Sladen devotes his business energies entirely to the selection and breeding of the very best varieties of bee, holding, as he does, that only by careful attention to these points can adequate results be obtained; and when it is borne in mind how much of success in bee-keeping depends on having only high-class queens, none will object to pay a somewhat higher price than is charged by ordinary queen-breeders who devote less time and care to the subject than Mr. Sladen does. The beautiful coloured plate of queen and worker bees accompanying the catalogue is well worth preserving.

W. R. Garner, Dyke, Bourne, Lincs.—Another neatly got-up little catalogue of twenty-six pages. It gives, in condensed form, a list of all that a bee-man requires, and is plentifully illustrated, so that the various appliances described can be seen at a glance. Mr. Garner also makes a speciality of sending out hives in the flat—ready for nailing together — at very moderate prices. Other special features are included, which make the list useful for reference.

C. Redshaw, South Wigston, near Leicester.—Mr. Redshaw's bee-goods have been so long before bee-keepers that it only needs that we should draw attention to his No. 17 catalogue, and let its contents speak for themselves. Our personal knowledge of shows enables us to say no bad, or even commonplace, workmanship ever leaves his hands. Everything is interchangeable, and all fit well.

Bee Shows to Come.

A nominal charge of 3s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. **Entries closed.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. **Entries closed.**

July 19, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 12**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Bee-keepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, etc. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close July 3.**

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries close August 9.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb.

Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S Cartwright, Hon Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes. Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight. Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

STILL WAITING (Erdington). Unfair Dealing. 1. The queen-bee sent is a good-looking and full-sized, mature one, with every appearance of being fertile. 2. If the advertiser—whose name it would be obviously unfair to publish while withholding your own—"guaranteed safe delivery," you would probably be safe in suing him in County Court for value of the stock smashed in transit. On the other hand, we have had no complaint of the advertiser in question. 3. We do not quite see what good will follow your placing the correspondence before your county association. They could only advise as we have done.

G. H. F. (Canterbury). — Repeating Queries.—In referring to queries already replied to, correspondents should quote No. of query or page whereon it appeared. We cannot tell what letter you refer to.

A NEW BEGINNER (Manea, Cambs).—Honey from White Turnip Flower.—We are not familiar with honey gathered from the flowers of the white turnip, but should think it will be about on a par with that from any of the cabbage tribe of plants, which is fairly good.

E. H. H., A BEGINNER (Chadwell Heath). —Suspected Loss of Queen.—The dead insect sent is not a queen as supposed, but a full-grown drone. Your "only stock" is therefore quite safe.

J. H. C. (Doncaster).—Bee-forage.—The tree from which sprig of leaves and blossom are sent yields pollen plentifully, but little or no honey.

J. P. (Polperro).—Bees Dusting Themselves.—Owing to loose packing in somewhat too large box, any white substance with which the bee sent may have been covered had been shaken off in the post. Helped by a magnifying glass, we did, however, find a few grains of white pollen on the thorax, such as bees get from various flowers at this season.

Suspected Combs.

DOUBTFUL (Newport, Mon.).—Foul brood is rapidly developing in comb sent. For treatment, deal with it as directed in "Guide Book."

F. M. (Eastbourne).—There are slight signs of foul brood in the incipient stage in two cells; all the other unsealed larvæ —of which there is a good deal on both sides of comb—seem normal, and the brood in sealed cells is much the same; but the disease is undoubtedly there.

E. H. (Pontypridd).—The comb shows a bad case of foul brood, and we are glad to hear that your neighbour is willing to destroy the stock on hearing our view of the case.

NOVICE (Bucks).—There is no disease in comb sent.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Wednesday, June 21, Mr. T. I. Weston occupying the chair. There were also present Colonel Walker, Dr. Elliot, Messrs. T. Bevan, W. Broughton Carr, W. F. Reid, W. Sole, F. B. White, W. Woodley, and the Secretary. Letters explaining absence were received from Miss Gayton, Messrs. R. T. Andrews, H. Jonas, A. G. Pugh, and E. Walker.

The minutes of the previous meeting were read and confirmed.

Three new members were elected, namely:—Mr. J. E. Death, Bardwell Cottage, Needham Market, Suffolk; Rev. M. W. B. Osmaston, Goodnestone, Dover; Mr. A. E. Paul, 27, Salisbury-road, Bexley.

The Finance Committee's report, giving details of receipts and expenditure to date, was presented by the Chairman, and duly approved.

Arrangements were made for examinations of candidates for third-class certificates in Lancashire on July 8, Nottinghamshire on July 20, and Worcestershire on August 10.

On the recommendation of examiners, it was resolved to grant first-class diplomas to Miss La Mothe and Mr. T. E. Whitelaw.

The Secretary reported upon arrangements made for the Royal Show, June 27 to 30, and the examination to be conducted in connection therewith.

Mr. Weston submitted draft of a letter to the President of the Board of Agriculture, embodying the evidence collected in favour of, and against, the proposed Bill for the Better Prevention of Bee-pest. After emendation in several minor particulars the letter was formally approved for presentation to the Board.

The next meeting of the Council will be held on Wednesday, July 19.

ESSEX AGRICULTURAL SHOW.

SHOW AT SOUTHEND-ON-SEA.

The above show was held on June 14 and 15; the Bee and Honey Section being under the management of the Essex and Suffolk B.K.A. The entries for honey were both numerous and of high quality, giving the judge, Mr. W. J. Sheppard (who was assisted by Dr. Elliot and Mr. Dearden), no easy task in classes where the competition was so keen.

Their awards were as follows:—

Complete Inexpensive Hive. 1st, Jas. Lee and Son, Highbury, London; 2nd, J. Greenhill, Wimbledon.

Hive Made by Amateur. — 1st, T. P. Soal, Rochford; 2nd, C. Lodge, High Easter.

Six 1-lb. Sections (7 *entries*). — 1st, C. Lodge; 2nd, W. Turner, Lavenham; 3rd, W. Loveday, Hatfield Heath.

Three 1-lb. Sections (10 *entries*).—1st, C. Lodge; 2nd, W. Loveday; 3rd, W. Turner.

Single 1-lb. Section (11 *entries*).—1st, W. Turner; 2nd, C. Lodge; 3, E. T. Cock, Finchingfield.

One Shallow-frame for Extracting (3 *entries*).—1st, W. Turner; 2nd, W. Loveday; 3rd, C. Lodge.

Six 1-lb. Jars Extracted Honey (5 *entries*). —1st, W. T. Soal; 2nd, C. Lodge; 3rd, W. Loveday.

Three 1-lb. Jars Extracted Honey (8 *entries*).—1st, C. Lodge; 2nd, W. Loveday; 3rd, W. Turner.

Single 1-lb. Jar Extracted Honey (9 *entries*).—1st, W. T. Soal; 2nd, C. Lodge; 3rd, E. T. Cock; extra prize, A. W. Salmon, Chingford.

Six 1-lb. Jars Granulated Honey (2 *entries*).—1st, C. Lodge; 2nd, W. Turner.

Honey Trophy.—1st, C. Lodge.

Beeswax.—1st, C. Lodge; 2nd, W. T. Soal; 3, W. J. Kitson, Stanstead.

Beeswax for Retailing.—1st, C. Lodge; 2nd, T. Bunting, Dibden.

Honey Vinegar.—1st, C. Lodge; 2nd, W. Loveday.

Mead.—1st, W. Loveday; 2nd, T. Bunting.

Mr. Wm. Herrod, apiarist and lecturer of the B.B.K.A., gave demonstrations in the bee-tent, and the crowds that listened to him, showed, both by their attention and the numerous questions that were asked, how greatly his labour was appreciated. This, added to the splendid weather, made the show from the bee-keeper's point of view, one of the most successful held by the Essex and Suffolk Bee-keepers' Association for some years.

G. W. Alder, Hon. Sec., Rawreth, Essex.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5927.] Beautiful weather during the past fortnight has redeemed the bee-year. Our erstwhile dour countenances are now

wreathed with smiles of satisfaction; our customers for swarms (some so impatient as to cancel orders which within the succeeding twenty-four hours would have been filled) have all been served, and continued reports of the safe arrival of swarms (many of them sent north of the Tweed) with scarcely a dead bee in the box on arrival, points to progress in packing, especially when one looks back a few years and recalls the losses suffered on rail from suffocation. Possibly the railway companies are now more careful not to place large and heavy packages on the top of the boxes containing the bees.

Keep a lynx-eye on the wax-moth: the few individual moths and larva found now should be killed, as these are the source of the many destructive creatures later on in the season.

In my last notes I made no reference to *experts* in dealing with driven bees, and I am sure JOURNAL readers and others interested in the progress of our craft will welcome the remarks of "Expert" (5922, page 242) as to the general immunity of bees in skeps from foul brood. I may say, in passing, that I have handled bees nearly all my life, I hived my first swarm in June, 1856, and kept bees in straw skeps till some twenty-seven years ago, and till then did not know foul brood even by name. I must say that had I kept bees in *frame-hives* instead of skeps, I should have increased my income from the pursuit at least tenfold. This is, however, beside the question raised by "Expert." He says in his letter last week that "by reading between the lines of Mr. W.'s notes, I gather that he has never soiled his hands with driven bees etc." In reply, I may say that I, too, have bought driven bees more than once or twice, yet I did not purchase foul brood with them. In the past vols. of B.J., the straw skeps have, in many letters, been accused of being centres of the pest; in fact, I believe, the promoters of the last F.B. Bill, in pressing it forward, hoped to reach and destroy these centres of infection. Yet, here is an "Expert," with practical experience, who says F.B. practically does not exist in straw skeps; a fact, I, personally, am very glad to know.

Swarming Time. — The 22nd was our swarming-day, par excellence. We hived twenty swarms, and despatched eighteen of them by first train next morning; fourteen at home-apiary, and seven at out-apiary (one returning to parent-hive). The next day we had several more. These sunny days spent in working among the busy throng, with the welcome hum of their myriad wings in his ears, cheer the bee-keeper, and add a keener zest to his interest in the pursuit.

Now is the time to start nuclei for young queens, with which to re-queen those stocks that have not swarmed, and whose queens are past their prime. The June or early July-bred queens are the best, and those bred under the swarming impulse and in favourable climatic conditions are usually full of strength and abundantly fertile. If your early casts are headed with queens such as these, given care and help they will make grand stocks another season.—W. WOODLEY, Beedon, Newbury.

ROYAL LANCASHIRE AGRICULTURAL SOCIETY.

THE COMING SHOW AT LIVERPOOL.

[5928.] It was suggested to me in committee of L.B.K.A., that I should ask you to draw the attention of B.B.J. readers to the schedule of the Royal Lancashire Agricultural Society's Show here, at Liverpool, on August 3, and three following days. Your notice in "Shows to Come," needs a little extension, and also leaves out the medals of the Lancs. B.K.A. You will see by enclosed schedule how very liberal the prizes are. It is greatly to be desired that all bee-keepers should, by making entries, support the agricultural society in view of the exceedingly liberal money prizes they offer, and thus encourage the society to continue the classes in the bee-department in future years.

May I also ask Lancashire bee-keepers to bear the county classes in mind, and especially the county "trophy" class, in which I am offering a silver challenge cup of the value of £5? I originally started this trophy class by presenting the money prizes for several years, but the R.L.A.S. having now taken this class up, I am offering the cup as an additional incentive to my neighbours to show to Lancashire people Lancashire honey. I may say that the class would have been dropped some years ago, simply for want of sufficient entries to warrant its continuance, if I had not myself entered one or two trophies to fill up the show-benches. It is well known that I am not usually a honey exhibitor in competition, and shall not this year enter in the trophy class. I am, therefore, very anxious that my Lancashire friends shall not let the prize money go begging, with the inevitable result of the R.L.A.S. dropping the class in future years as one that produces no competition. —GEORGE ROSE, Liverpool.

SOME NOTES FOR BEE-KEEPERS.

[5929.] *Tripod Hive-stands.* — All hives, whether the floorboard rests on two cross-bearers or four legs, are practically provided with four points of contact with the ground. It appears to me, however, that it would be easier to level them if the

points of support were reduced to three. In photography and land-surveying, a tripod is found to be the most practical support for the instruments used, being most readily adapted to uneven ground. If our floorboards rested on the three points of a triangle—equilateral preferred—we should require fewer supports, and they would be as perfectly steady and secure as with four legs. If I had to renew my outfit, I should adopt such supports exclusively. Perhaps the hint may be useful to others.

Honey and Infection.—I agree with Bro. Colomban (5900, page 213) that honey when well boiled is not at all likely to convey infection. I cannot see how even the spore of foul brood can stand being boiled through without giving up the ghost. I think there is not the slightest danger in using either well-boiled honey or wax for hive purposes, and, to my mind, bee-keepers need not therefore suffer any loss through foul brood so far as these substances are concerned. Boil thoroughly.

Eucalyptus Oil. — While this may be harmless as regards its effects on the life of the bee, I think it is on some grounds undesirable to make use of it in a hive, because the smell of it causes discomfort to the bees, and on this account I think that other remedies are preferable. In my opinion, all remedies, except the radical one of a thorough cleansing, should only be relied on as temporary aids.

Early Honey.—The early honey offered for sale by your advertisers is not, I suppose, clover honey. Even here, in Cornwall, the clover has only just begun to appear. We usually get it at the best in July and to end of August. I fear it will be earlier this year than usual, and I have been aiming to be ready for July 1 chiefly this season. We have had the much needed rain at last. — W. J. Farmer, Redruth.

[With regard to honey from hives affected with foul brood being harmless as bee-food, we may remind our readers that cultivations have been repeatedly made from honey containing F.B. spores after being boiled for over an hour.—Eds.]

AN ENORMOUS RUNAWAY SWARM.

CLAIMING THE VAGRANTS.

[5930.] May I ask your timely advice in regard to the best course to take in claiming runaway bees, because what I do must be done quickly? The case stands thus:—I have three very strong stocks of healthy bees, in frame-hives, which I call 1, 2, and 3 respectively. Two racks of sections were placed on each early in the season, with the object of preventing swarming, if possible. No. 1 swarmed on May 27, and the same evening all queen-cells were cut out and swarm returned. An extra rack of sections was also given, and since then the bees were working well in all three racks, until this week, with sealed stores in bottom rack. No. 2 swarmed on June 16, No. 3 swarmed on the 21st, and in each case the same course was followed as with No. 1. On June 22 No. 3 swarmed again, and the bees were driven back. Next day No. 3 swarmed for the third time, upsetting the whole of my stocks. The air was a perfect whirl of bees; swarms issued from Nos. 1 and 2, and joined the bees of No. 3, the whole lot clustering in one enormous mass. I procured a very large skep to hive them in, but the cluster measured about fifteen inches in diameter, and was close on two feet long. I hived them, filling the skep, but it would not hold all the bees, so I left them to settle down. After remaining in and about the skep for an hour, the whole swarm came out and rose high into the air. I tried the syringe, but they were soon out of reach, and flew straight away (about 800 yards) to the garden of a labourer, who allows two old empty box-hives to remain with entrances open in his garden. I followed the swarm to the spot named, and, on my approach, heard the labourer's wife exclaim, "Here is a swarm of bees coming, but I think my bees are all dead." I replied, "Yes, they are mine. I have followed them here." The grass and weeds had grown level with the tops of the hives, but the bees settled on one hive and simply covered it. As the man did not return from work until evening, we left the matter over till his arrival home, when, accompanied by a friend, I called on him. The man at once said, "Are you come to take my bees away?" "Why," I replied, "your wife told me to-day that your bees were all dead." "Oh, no," he answered, "I saw a few there all this week." My friend then remarked, "The bees you saw were scouts from the swarm." But the old man stuck to his point that he had had a few live bees in the hive, and very carefully cut the grass and weeds the same evening to give the bees a chance to get in and out. I asked him if we could come to any arrangement, but he replied, "I don't want to buy your bees, and will not have my hives meddled with." I then asked permission to examine the hive, to see if there was any brood or stores in the comb, but this he flatly objected to. My question therefore is: Can I take out a search-warrant and employ an expert to examine hive, and, if found devoid of brood or stores, have I a legal claim for full value of stocks? I have lost three queens in their second year, but have given a ripe queen-cell to each stock; at the same time the three stocks will remain

dormant for almost a fortnight. Trusting for a line of reply.—J. H., Aldershot.

[It is a case for County Court, and we think you would get compensation.—EDS.]

AN OBSERVATORY-HIVE INCIDENT

AND OBSERVING LONDON CHILDREN.

[5931.] Yesterday two children said to me, "You have two queens in your hive, and one is stinging the other." As such extraordinary statements are not seldom made to me, I took little notice of the remark at the time, but they insisted in drawing my attention to what was taking place, and on my going to look, there I found a young queen, just hatched out, sitting on the old queen and apparently trying to sting her. The latter made not the slightest resistance, and the worker-bees around made no effort to protect the parent-queen. Then the young queen walked away, when the workers immediately surrounded the mother-bee and caressed her all over with their antennæ. She lay first on one side and then on the other. This went on from 11.20 till 1.30, when I was unable to give further attention to the hive. During this time and up till 5 p.m., my boy tells me, there were four tightly packed groups of bees on one of the combs. They looked as if they might be "balling" a queen, but I cannot say what was in the centre of the knots. We have not seen either the old or the young queen since I left the hive at 1.30 yesterday, and we can find no trace of their dead bodies.

I did not notice that there were any capped queen-cells in the hive, though there are two cells still uncapped. It seemed strange that the old queen should offer no resistance to the matricidal onslaught of her daughter, and that the workers made no attempt to defend their queen.

If I can ascertain the fate of the queens mentioned, I will let you know.

June 22, 10 p.m.—Neither of the queens has been seen, but we find four queen-cells in positions corresponding with the positions of the groups or knots of bees referred to above.

I may be troubling you with an occurrence quite familiar, but to me it was an event I had never witnessed before. —(Miss) K. M. HALL, Curator, Stepney Borough Museum, London, E.

AN OLD-TIME BEE-HOUSE.

[5932.] Enclosed is a snap-shot photo of "Bygone Bee-keeping," taken by myself, which I thought might possibly be of interest to readers if you cared to use same in either of your papers. The old bee-house seen is situated in the front garden of a farmhouse near Maxtoke, in Warwickshire, and faces the east. It is only a few yards from, and in full view of, the road; this probably is the reason for the stout iron bars seen in photo, showing the staples for padlocks, as, when padlocked, they would prevent the skeps of bees being stolen by the passers-by. I have never heard of any bee-house with these since I became interested in bee-keeping. It would have made a much more interesting picture if the skeps had been in place and occupied by bees, but is a memento of the customs of our bee-keeping forefathers.—H. BRACE BROOKES, Birmingham, June 14.

AN OLD-TIME BEE HOUSE.

QUEEN-MATING.

AN UNCOMMON INCIDENT.

[5933.] I wish to report what was to me an unusual occurrence that came under my observation this morning at 11.30 a.m. While watching the bees in front of my hives (I was looking up at the bees flying in mid-air), I saw two bees apparently attached to each other flying round and round. This caused me to observe them more closely. They were at first circling as high as thirty feet from the ground, and go to as low as fifteen, when they parted, flying in opposite directions. One, which proved to be a drone, went straight for my skeps, of which I have six among

my frame-hives; the other, which I believe was a queen, did not come to any of my hives, but made off towards the apiary of a neighbour.—C. B. E., Third-class Expert, June 18.

[The occurrence in question was, no doubt, a queen and drone in the act of mating, and though rarely seen in ordinary apiaries, it has been not seldom observed by those who own large numbers of hives.—EDS.]

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Foundation Old and New.—The *American Bee Journal* queries, "How much better is fresh foundation than that which is a year old?" and some thirty of the leading bee-keepers throughout the States reply with practical unanimity, "*Not an iota.*" Many record that they have been using foundation five years old without detecting any practical difference. But (there is a "but") the foundation must be carefully preserved and packed carefully away. "If the foundation has been left as got from the factory, protected from air, dust, and light, the difference is very slight. If it has been exposed to these agencies, it may be very considerable." Old foundation, however, should be dipped in warm water, or heated, before being given to the bees. If this is carefully attended to, old is equal to new. We, on this side, will practically agree with the above pronouncement.

Strengthening Weaklings.—Here is a plan from the *Review* well worth trying:—"As soon as they have a patch of brood, each is taken to a good strong colony and set on top, with a queen-excluding honey-board between. Close up all entrances except that of the strong colony. The bees will divide themselves about equally between the two queens. In about five or six weeks I can separate them, and in nine times out of ten I have two good strong colonies. For twenty years I have treated all my weak colonies in this way in spring," says Mr. W. E. Alexander. In reporting on a trial of the experiment, Mr. J. A. Pearce, Mich., says, "I examined them in about three weeks, and such a change I never saw! Those weak colonies had built up so that they were as strong as, if not stronger than, the ones below. Instead of detracting from the lower ones (a fear with some) it seemed to be the very reverse, as if they had been stimulated to greater activity." It would be interesting if experiments were made on these lines and reports of results sent in to our Editors.

English and American Bee-books. — The new joint-editor of the *American Bee-keeper*, just before signing on, wrote, "Not until about 1800 was the first bee-book published in America, to be followed at varying intervals by others little and big, most of them being largely *copies of the English works.*" Several of our English books are highly commended, among them Mr. Cowan's most excellent book on "The Natural History of the Bee." Of the general run of American bee-books on the market he names two or three as "oases in the desert"; and he then sighs for the time when "Americans can have books which are well written and arranged, well illustrated, well indexed, and in details of paper, type, press-work, and binding will be a credit to our craft and well worth buying." Could we not look for one such from "the facile pen" of Mr. A. C. Miller?

Foul Brood Kill to Cure.—In the *Canadian Bee Journal* Mr. Sibbald, referring to foul brood, says:—"The first loss is the least, and, if we have a few colonies diseased, it would pay better to melt the comb, destroy the larvæ, and lose that much than try to save it." Another speaker said:—"I think everybody who follows Mr. McEvoy's system will cure and get rid of it entirely." In the same paper we have another *cure* given:—"When a diseased colony is discovered, I dig a pit, place hive and contents therein, apply a coal-oil torch, and bury the ashes. This means total eradication, and no other remedy yet known will be so effective at times." Yes, in a bad case total eradication and total destruction are equivalent terms.

A Honey Combine. — Americans count considerably on an impetus being given to the industry by the formation of a Honey Producers' League. Mr. Hutchinson, voicing the united opinion of the National, makes a spirited and forcible appeal to all bee-keepers to combine. In all recent bee-papers he publishes a manifesto in which he says:—"A large share of last year's honey-crop is still unsold, while the market is practically dead, as is easily shown by reference to the market reports." To cure this is the aim of the League. Advertising will be largely resorted to, not in bee journals, but in the daily Press. The following might be taken to heart on this side:—"Every other industry is pushing its products upon the markets by every means imaginable. Are we to sit supinely down? See how other things are pushed to the front by advertising. Let us push our delicious product into the position it so richly deserves."

"*The Pivotal Point.*"—This is the *Bee-keepers' Review's* estimate of the need to secure legislation for the compulsory extermination of foul brood. It is too often the pivot on which success or failure hangs

here as well as there:—"Yet some men are so ignorant, perhaps prejudiced, in regard to the disease, and will refuse to listen to instructions from those who know, and continue to keep diseased colonies until they perish, and the neighbouring bees carry home the honey and the seeds of the disease. All this can happen because there is no law to compel them to get rid of the disease." This is spoken *apropos* of the rejection of the F.B. Bill by the Governor of Missouri. In vetoing the Bill he has raised a hornets' nest about his ears, and bee-keepers seem *unanimous* over the necessity for such a Bill, if the industry is to prove a success. The reasons given for the rejection of the Bill read very like what we have heard lately from the opponents of the proposed Act in this country—theoretical deductions from an unsound premiss.

Honey 1d. per Pound.—This choice titbit from the *Australian Bee Bulletin* shows that low as are our prices, there are lower depths:—"Twenty honey tins, net weight 1,151 lb., at 1d. per lb., £4 15s. 11d.; deduct freight, tins, and other charges, £1 6s. 9d.; net proceeds, ½ ton of honey, £3 9s. 2d." Evidently honey is a drug on the Australian market. No wonder our cousins cast longing eyes to our shores and wish to cater to our tastes. Somehow, however, honey from the Antipodes has never established itself in this country as a paying speculation. One writer says:—"It is the duty of the Government to take a hand in the deal and see that the experiment is carried out under the most favourable circumstances." Government turning honey-tasters is quite a new idea. Not pleased with the present standard over here, they want to "educate the British taste."

The Sibbald Method.—In Favour:—

"By this system no shaking is required; no chance of an absconding swarm; no looking for queens; no destroying of queen-cells; and after-swarms are unknown."—Sibbald.

"I see no possible hitch in the proceedings and see many advantages."—Editor Hutchinson.

"We can make a great success of this system."—Wm. McEvoy.

"The more I think over this plan the more I am pleased with it."—Editor Root.

"I should like to state the plan is a fine one." D. R. Keyes.

"Sibbald's idea is a good one."—M. Pettit, Canada.

"'Swarthmore' has practised the method for more than twenty years and found it O.K."

Against the method we have the following:—

"In my estimation it has nothing to commend it."—F. Greiner.

"It is not *new*. You will find it on page 163 of 'Forty Years among the Bees.' The Sibbald plan is not likely to produce the same results in all places and in all hands."—Dr. C. C. Miller.

"You lose enough brood many a time to make nearly a swarm."—E. W. Alexander.

"The essential distinguishing features and manipulations described by Mr. Sibbald are identical with those advised by me."—O. L. Hersisher.

"I failed to find anything of real value in the plan."—J. E. Chambers.

"A revised form of earlier practice."—H. E. Hill.

"I fear the bees will swarm from the old home when the first queen hatches."—Mr. Thorne, Canada.

"A poor queen is likely to be the result unless a greater number of young bees is given than will be found on a comb."—J. A. Green.

I am inclined to doubt if the re-united colony will stay *cured* of the swarming fever. With an "old lady," I should be more than suspicious.

Queries and Replies.

[3791.] *Transferring Bees from Old Frame-Hive.*—I am only a beginner with bees, and I have a stock in a frame-hive, but the latter is in a bad condition, and I wanted to know how to get the bees into a new hive. The old one has no inner body-box, the frames being hung on ledges, and so I ask:—1. Would it be best for me to lift two or three frames at a time into the new body-box, or is there a better plan? I have looked through the "Guide Book," but cannot find anything to show me just how to proceed. Being a constant reader of the B.B.J., I thought you would inform me. The bees are a strong stock, and have a full rack of sections nearly ready to come off, while there is not room under roof to raise the rack and put another below. 2. Would it be best for me to remove the nearly full rack as it is, and substitute another, and then work them to the end of the season with a single rack? Or will it be best to transfer them now? I send name and address for reference.—D. M. F., Stroud, Glos.

Reply.—1. If the frames are of standard size (with 17 in. top-bar) there will be no difficulty in transferring the bees and combs into new hive as proposed. Regarding method of removal, an old hand with bees would lift two or more frames at a time, but it is better for a beginner to remove them singly, at least to start

with. Begin with the outside frame, and set them in the same order in the new hive as in the old one. If a fine day is chosen, and bees are kept quiet with a little smoke, all will go on well; not only so, but you will then have no trouble in tiering up your two racks of sections.

[3792.] *A Beginner's Queries.*—As I am intending to keep bees, I should esteem it a favour if you would kindly inform me as to the following points:—1. I presume I cannot do better than use a "W.B.C." hive? 2. Should I do better by starting with a swarm now, or wait until August and get some driven bees with which to build up my first stock? 3. Do you advise leaving sufficient honey to keep the bees right through the autumn and winter, or do they do as well if only a little of the natural stores are left and the bees fed up on sugar-syrup? 4. Would you also give the respective addresses of the Warwickshire and Worcestershire County B.K.A. secretaries? I send name, etc., and sign — L. T. B. M., King's Norton, June 16.

Reply.—1. The type of hive to use is a matter of preference, and you should get catalogues from one or two of our leading advertisers to select from. 2. Far better to start with a good top swarm as soon as one can be conveniently arranged for. This will afford a much better chance of success than starting with driven bees. 3. We advise you not to remove any natural stores from brood-nest, unless the brood-combs are overcharged with honey after removal of surplus, which is not at all likely. 4. Mr. J. Noble Bower, Knowle, is hon. secretary of the Warwick B.K.A., and Mr. J. T. Phillips, Spetchley, hon. secretary of the Worcester B.K.A.

[3793.] *Dividing for Increase. — Bees Deserting Queens.* — In reference to the swarming plan of Mr. John M. Hooker (page 202 of B.B.J. for May 25), I should like to say, seeing that all brood on the first night of the operation is in the upper body-box, and queen is in the lower body-box with excluder between. I therefore ask:—1. Is there no danger of queen being deserted, and so injured or killed by cold? 2. I have a rack of sections on one, and a box of shallow-frames on another of my six hives almost ready for removal; do you not consider this rather good for London? 3. Would you care for a nice photo of my tidy little apiary for your "Homes of the Honey-bee"? 4. Although I manipulate with naked hands and arms, and rarely get stung, I am always troubled with vicious bees round my face. Even when I merely stroll over to the farm and stand there, I always have one or two worry me with that vicious, hissing sound that it is no use to ignore. Can you offer me any hint on this matter? Name, etc., sent for reference.—W. J. S., Chiswick.

Reply.—1. The plan in question is that of Mr. E. W. Alexander, an American bee-keeper. It appeared in "Gleanings," as stated by our friend Mr. Hooker, and would no doubt be quite safe in the warmer climate of the U.S.A. On the other hand, we have always reminded our readers of the risk—in our erratic climate—of queens being deserted by the bees when cut off from brood-nest in an empty hive below by queen-excluder. This risk is, however, minimised by inserting a frame of brood, as stated in Mr. Alexander's plan in our issue of May 25. 2. Very good indeed in view of the season. 3. Send on photo by all means. 4. The trouble will be entirely overcome, when manipulating hives, by having a veil of Brussels net with an elastic band in top edge to slip over the hat and hang down below the face. This will not obscure the vision, and, if left loose at bottom, is neither hot nor stuffy to wear. Or, as an alternative, smoke a cigarette when working among, or watching, bees.

[3794.] *Ridding Hives of Ants.*—Can you oblige by telling me the best way to get rid of ants that crawl up the legs of my hives and get into the surplus-chamber? My hives are on grass, standing on bricks, and, though I have destroyed some of the ant-nests with boiling water, they still come after the syrup. Can I place any powder, say carbolic, round the legs on the bricks? Name, etc., enclosed for reference.—W. F. M., St. Leonard's-on-Sea.

Reply.—Messrs. Jas. Lee and Son, whose address appears in our advertisement pages, have introduced an iron cup-stand for screwing into hive-legs which effectually removes the trouble you complain of, if the "cup" is supplied with a little paraffin oil occasionally. The cost of the appliance is small.

[3795.] *Bees Re-queening Themselves.*—For some weeks now I have noticed the bees in one of my hives not working as well as they should, and carrying in very little pollen. I, therefore, opened the hive yesterday and found that the bees had made no attempt to go into the rack of sections, and also found two or three of the frames quite clear of bees. Suspecting that they had lost their queen, I examined the frames carefully and found a considerable quantity of drone-brood; also a few eggs and some worker-grubs and sealed brood. A few of the eggs appeared to be attached to the sides of cells and not to the bottom as usual. I also found an unsealed queen-

cell and a rather small queen (a young one, I conclude). The workers appeared to have carried honey into most of the cells of brood-nest, so I transferred an outside frame, which was quite empty, to the centre, to induce the queen to lay. 1. Can I do anything more? 2. What is the cause of so much drone brood? 3. Should I transfer all the outer frames to the centre, as they are mostly empty? I have no extractor or I would extract what honey they have carried in. I send name and sign—NOVICE, Amlwch, N. Wales.

REPLY.—1. No, only see that the eggs of young queen mentioned result in worker-brood. 2. Too much drone-comb. 3. See that frames contain little or no drone comb.

[3796.] *Early Issue of Swarm.*—As a subscriber to the B.B.J., I should be glad of reply to the following queries:—1. A first swarm left one of my hives at 8 a.m. on June 22. The hive in question has two racks of sections on, the top one being nearly full but not quite sealed. I was looking for a swarm, but was it not unusual for the bees to leave the hive at such an early hour? 2. Could you forward me a small piece of comb affected with foul brood? I would defray expenses and destroy comb after inspection. I might add that my apiary of fifteen strong stocks is free from disease. Name, etc., sent for reference—C. P., Woodbridge, Suffolk, June 24.

REPLY.—1. Eight a.m. is very early for a swarm to issue, but we have known many to come off at that time. 2. We cannot undertake to send samples of diseased comb, as desired. On the other hand, we are always pleased to show specimens of such combs as are sent here for diagnosing to any reader who may wish to see such, if notified beforehand, so that a sample may be available.

[3797.] *Keeping Bees near London.*—Would you kindly say if you think I could keep bees with any chance of success at my home? I am only five miles from London, but ours is a quiet suburb, and there is not much traffic. My garden is 30 yards long by 10 wide, and I grow a fair supply of ordinary garden flowers, but I have no fruit trees. There are also good gardens in front and on both sides of my house. Of course, I am speaking of my back garden, which runs alongside those of my neighbours. Thanking you in advance for a line of advice, I send name and sign—A. G., Hornsey, N.

REPLY.—It all depends upon the bee-forage growing in a radius of a couple of miles from your garden. Not much reliance can be placed on ordinary garden flowers, as you may know when we say that of the sixteen or seventeen varieties in list sent, only the sunflower and wall-flower are of any service to bees, and this for pollen only. We should advise a trial of a single stock for a season, when the bees will themselves soon show if there are any honey-yielding plants or trees grown within the radius we have named.

[3798.] *Bees Killing Queen after Removal from Combs.*—I shall be glad if you can explain the cause of death of enclosed queen? She was taken with the bees from a condemned (foul brood) hive on the night of the 15th inst., and appeared all right when run into the swarm-box. It was a bad case, but the bees were fairly strong in number. They were put into a dark, cool cellar and remained there till 7 o'clock on the morning of the 18th. I could not get away from business the previous night. When the box was opened she lay dead with about a handful of workers on the canvas. You will note that the wings are entirely eaten away. Another lot treated at same time, and in same manner, had built comb in the box, and in it was about fifty eggs. I send name and sign—J. A. S., Studley, June 19.

REPLY.—The occurrence detailed above is remarkable, and we never heard of a similar case. The dead queen must have been "balled" for many hours, and severely mauled while in that condition, for her wings have been entirely gnawed away. The second case you give particulars of just proves the truth of the saying, "Bees do nothing invariably."

[3799.] *Bees Swarming after Dividing for Increase.—Dead Queens Cast Out.*—1. A relative of mine has sent me particulars of a hive from which the accompanying bees were taken, and is anxious to know whether they are young queens? 2. Why, after dividing up, the old hive should have swarmed? A fortnight ago the county expert visited the apiary and found this colony so strong, that he deemed it advisable to divide it; filling up space of the frames removed with full ones of foundation, and it is believed that only one queen-cell was left, all others being, as supposed, destroyed at the time. On Thursday last, the 15th inst., the bees in old hive swarmed in two clusters. Two queens were destroyed and the bees put back. On the 16th, the hive again swarmed, and then ten queens were taken out of swarm and destroyed. The bees now sent do not appear to me to be queens; but I cannot account for the swarming so soon after division. A reply in next issue to—CYMRIC, Winchester, will oblige.

REPLY.—1. The ten dead bees sent are all young queens. 2. The parent hive must have been left exceptionally strong, to raise queens and swarm after dividing, as stated.

On the other hand, you do not make it clear if the parent-queen was destroyed or not when the colony was divided, but the fact of queen-cells being built implies that the parent-queen was left, in which case the swarming will be explained by the prolificness of the mother-bee.

Echoes from the Hives.

Great Wakering, Essex, June 20.—I thank you for reply to query 3776. I listened for the "piping" noise on night of 11th inst., but did not hear any unusual noise; 12th was raining all day, so was not favourable for swarming. Kept watching for swarm up till yesterday morning (19th), when, owing to the bees being idle for several days for want of space, I thought better to super, so I put on a rack of sections at 10 a.m.; and, at 11 a.m., had the pleasure of seeing a swarm rushing out of hive, and in a few minutes clustered on opposite side of hedge, about ten inches from ground. I carried round my hive and proceeded as explained in plan (*a*) in "Guide Book." Had swarm safe in hive in about ten minutes, and the hive back in its proper stand by 12 noon. They are working nicely to-day. Thanking you for advice.—J. T.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 27 to 30, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K. Associations as arranged in divisions or groups of counties. **Entries closed.**

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. **Entries closed.**

July 19, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 12.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Beekeepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Sections, Shallow Frames, Extracted Honey, light and dark and granulated Beeswax, Instructive Exhibits in Bee Culture, etc, and special County Class for Trophy. Schedules from Edward Bohane, Secretary, Miller Arcade, Preston. **Entries close July 3.**

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire Beekeepers' Association. Open class. Schedules from Mr. A. R. Moreton, Hallow, Worcester; or Mr. G. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries close August 9.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23, at Lancaster. — Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. Open Classes for Extracted and Comb Honey, also Beeswax and Produce. Four silver and bronze medals and other specials. Schedules from Thos. Armitstead and Son, Auctioneers, Lancaster. **Entries close August 14.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes, Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight. Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

B. (Lincs).—Suspected Disease in Queen-cells.—What you term "curious cells," hanging down like "queen-cells," are rightly named, and contain the remains of larvæ which failed to pupate. This occasionally happens in the experiences of those who breed queens extensively, but we cannot account for the offensive odour of the dead larvæ, as in your case. We think, however, that their death was caused by "chill" only.

READER (Glam.). — Drone-cell Foundation for Brood-chamber. — There must be a mistake somewhere, as no sensible dealer would send "20 lb. of foundation," like sample, for use in brood-chambers. It is simple drone-cell foundation, such as is sometimes used in shallow-frames for extracting, but unfit for brood-combs—apart from size of cell—the wax used being too soft and sheets too thin for brood. We do not wonder at its sagging in spite of being "wired."

NOVICE (Amlwch). — Faulty Queens. — 1. The dead queen looks like a drone-breeder and bears out your view of her worthlessness. It was quite the best course to re-queen. 2. Drones are of full size and right in all respects. They are the ordinary brown or native variety.

IRON (Macclesfield). — Insect Nomenclature. We are so far unable to name the small fly sent, and mentioned as "infesting a tomato house in millions." Perhaps some gardening reader used to such houses and their pests may help us in naming the fly?

D. B. M. (Exeter). — Sting Remedies. — There are many remedies on the market, one of the best known being "Grimshaw's Apifuge," supplied by most dealers (see advt. in B.B.J.). Do not be too nervous about handling your first bees, and use a veil and gloves for a week or two.

Suspected Combs.

ANXIOUS I (Dorset).—There is decided foul brood in newly-built comb sent, the cells being completely occupied with brood or eggs. The queen is evidently very prolific, but, amid diseased combs, she can only do harm by egg-laying. We should get the bees off present combs and into a clean hive, as directed in "Guide Book," when there will be a reasonable chance of seeing healthy brood in the hive.

J. A. B. (Dundee).—Comb sent is so old that every trace of brood has disappeared from sealed cells, but it is certain that the stock is diseased.

C. W. (Market Harboro').—We find no foul brood in comb, but sample indicates that the stock has something wrong with queen, some cells containing several dried-up eggs. Unless matter improve when young queen is mated, we should destroy the stock and start anew with fresh bees of more vigorous and robust strain.

W. Y. (Thirsk).—There is foul brood in comb; not of very bad type, but quite bad enough to cause much trouble and yield no profit. As your neighbour has no experience in treating the disease, we advise getting rid of bees and combs.

BEESWAX (Devon).—"F.B." is developing in both samples.

W. T. (York).—There is foul brood in comb sent. Without being a "bad case," the fact of stock being weak and most of the combs in similar condition to that sent, we advise total destruction to prevent risk to your strong, healthy stocks already doing well in supers.

PEDAGOGUE (Lincoln). — We find slight signs of "F. B." in comb. The drone-brood in worker-cells shows that either the queen is worthless, if there is one, or else a laying-worker is ovipositing. We should destroy the stock.

SPORE (London, E.C.).—Comb sent is very old, and shows remains of foul brood of old standing. It is also infested with wax-moth. You can do nothing with regard to your bees that have visited the old skep beyond using the ordinary preventives, and keeping a careful look-out for signs of disease, which may, however, never appear in your hives.

**** Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

ROYAL AGRICULTURAL SOCIETY.

SHOW AT PARK ROYAL.

The sixty-sixth annual exhibition of the R.A.S.E. opened at Park Royal, London, on Tuesday, June 27, in beautiful weather, the Prince of Wales attending on the opening day, while their Majesties the King and Queen were present on Wednesday. It would have been gratifying to record a change in the prospect of future success for the Society's permanent showyard, but facts point seriously in the opposite direction, tending to show unmistakably that Londoners do not care about agricultural shows, while those directly connected with agriculture seem loth to journey up to the Metropolis.

The total attendance of paying visitors was 23,913, as against 52,930 last year, and 63,013 in 1903. The recent show has, however, lasted only four days as compared with five days in former years. The wet and chilly weather of the last two days no doubt also tended to keep Londoners away, but the result was very disappointing.

The bee-department was again well placed, and made a very creditable display, the entries numbering 169. This year—in the honey-section—a change was made in the grouping of the counties, the whole country being divided into two groups, as against four in 1903 and 1904. The result showed a sufficiently marked disparity in the two displays to show that bee-keepers in the North and Midlands do not yet show much appreciation of the efforts of the B.B.K.A. to remove the cause of complaint with regard to being unfairly treated in competing with the more-favoured counties of the South. In the latter group some excellent honey was staged, and the prize exhibits in the former were good.

Though only three collections of appliances were staged, the extent and completeness of each made up for the sparseness of entries. Besides, this year each collection included a suitable outfit for a beginner in bee-keeping. We were glad to see the name of Messrs. Abbott Bros., Southall, again as competitors on the show-bench. Messrs. Jas. Lee and Son secured first place with a well-selected display of up-to-date and well-finished bee-goods, which included everything required in the apiary.

Messrs. Abbott, who took second honours, also showed some capitally made hives and appliances, the timber used in manufacture being specially good, while the whole of the workmanship was more like cabinet-making than joinery. Without in the smallest degree disparaging the display, it seemed a pity that Messrs. Abbott still use a half-inch top-bar for the standard frame in some hives, because, however useful the thicker top-bar may be in stiffening the frame and preventing sagging, the half inch bar is not interchangeable with the standard unless the projecting ends (or lugs) are reduced on the underside. The third prize went to Mr. W. P. Meadows for a large and attractive display, in which tin goods were perhaps a bit too prominent; but as these are a specialty with this exhibitor, it follows that they should be well in evidence.

The single hive classes were not so well filled this year, but those shown were by the leading makers, and in consequence were good. Messrs. Lee and Son took first in Class 399, for complete frame-hive, with an exceedingly good "W. B. C." hive, price 24s., dovetailed throughout. Messrs. Abbott Bros. were again second with a very well-made hive, price 21s. It had no outer case, and the stand and floorboard were undetachable. The third prize went to Mr. Meadows for a hive of the non-swarming type, price 30s., with a rather elaborate arrangement for altering the position of floorboard so as to avoid crushing bees.

In the hive for cottagers' use (Class 400) the competition was not very keen, but the hives staged well merited the awards.

In Class 403 Messrs. Lee and Son showed a useful uncapping stand and drainer suitable for a large apiary, which deservedly took first prize, while certificates of merit were awarded to Mr. Thomas, for a swarm-catcher which has some new features that promise well for successfully accomplishing its object, and to Messrs. Abbott Bros., for a folding table for bee-keepers' use.

The only other class needing comment was 419, in which Mr. F. W. L. Sladen staged an interesting and capital arrangement connected with his latest system of queen-rearing. It got a well-merited first, as did also Mr. Wood, for a large and well-got-up exhibit of honey confectionery.

Messrs. W. Broughton Carr and Walter F. Reid judged the bee-appliances and miscellaneous classes; those for honey and honey trophies being taken by Mr. A. G. Pugh, who was assisted by Dr. Elliot, in the unavoidable absence of Colonel H. J. O. Walker, Mr. T. I. Weston acting as steward of the department. The following were the awards:—

Class 398.—*Collection of Hives and Appliances, Including Suitable Outfit for Beginner in Bee-keeping.*—1st, James Lee and Son, 4, Martineau Road, Highbury, London, N.; 2nd, Abbott Bros., Southall; 3rd, W. P. Meadows, Syston, Leicester.

Class 399.—*Complete Frame-hive for General Use.*—1st, James Lee and Son; 2nd, Abbott Bros.; 3rd, W. P. Meadows;

v.h.c., C. L. Greenhill, 80, Graham Road, Wimbledon.

Class 400.—*Inexpensive Frame-hive for Cottager's Use.*—1st, W. P. Meadows; 2nd, James Lee and Son; 3rd, Abbott Bros.; h.c., C. L. Greenhill.

Class 401.—*Honey Extractor.*—1st and 2nd, W. P. Meadows; 3rd, James Lee and Son.

Class 402.—*Observatory Hive with Bees and Queen.*—1st, James Lee and Son; 2nd, Sir Humphrey F. de Trafford, Bart., Market Harborough.

Class 403.—*Any Appliance Connected with Bee-keeping.* — 1st, James Lee and Son (uncapping tray and stand); 2nd, Wm. Thomas, Llandilo, Carnarvonshire (swarm-catcher); 3rd, Abbott Bros. (folding table for bee-keeper's use).

HONEY.

Group 1.—Limited to Cheshire, Cumberland, Derbyshire, Durham, Herefordshire, Lancashire, Leicestershire, Lincolnshire, Monmouthshire, Northumberland, Nottinghamshire, Rutland, Shropshire, Staffordshire, Warwickshire, Westmorland, Worcestershire, Yorkshire, the Isle of Man, Ireland, Scotland, or Wales.

Class 404.—*Twelve* 1-*lb. Sections.*—1st, John Helme, Norton Canon, Hereford; 2nd, J. Pearman, Penny Long Lane, Derby; 3rd, J. Boyes, Bridge Street, Cardiff.

Class 405.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, W. J. Cook, Binbrook, Market Rasen; 2nd, J. Pearman; 3rd, J. Jones, Wegber Quarry, Carnforth; r., John Helme.

Class 406.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.* — 1st, Geo. M. Tune, Vroneysyllte, Llangollen; 2nd, John Helme; 3rd, J. Jones.

Class 407.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, J. Pearman; 2nd, J. Boyes; 3rd, John Helme; r., A. S. Dell, Leigh, Lancs.

Group 2.—Limited to Bedfordshire, Berkshire, Bucks., Cambridgeshire, Cornwall, Devon, Dorset, Essex, Gloucestershire, Hampshire, Herts., Hunts., Isle of Wight, Kent, Middlesex, Norfolk, Northamptonshire, Oxfordshire, Somerset, Suffolk, Surrey, Sussex, and Wiltshire.

Class 408. *Twelve* 1-*lb. Sections.*—1st, Richd. Brown, Somersham, Hunts.; 2nd, Chas. Lodge, High Easter, Chelmsford; 3rd, Wm. Woodley, Beedon, Newbury; v.h.c. and r., Alfred Barber, Comberton, Cambs.; c., S. Wright, Bury St. Edmunds.

Class 409. *Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.* — 1st, C. Lodge; 2nd, J. Barnes, Burwell, Cambs.; 3rd, Eric Bennett, Methwold, Norfolk; v.h.c. and r., S. G. S. Leigh, Broughton, Hants.; c., James Lee and Son.

Class 410.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, G. W. Kirby, Knowle, Bristol; 2nd, C. W. Dyer, Compton, Berks.; 3rd, E. C. R. White, Newton Toney, Salisbury; v.h.c. and r., F. J. Old, Piddington, Northants; c., F. A. Kent, Dorchester.

Class 411.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, Richd. Brown; 2nd, James Lee and Son; 3rd, F. W. Hunt, Tipton St. Johns, Devon; c., E. C. R. White.

Class 412.—*Three Shallow-frames, Comb Honey for Extracting.* — 1st, E. C. R. White; 2nd, R. Brown; no 3rd awarded.

Class 413.—*Six* 1-*lb. Jars of Heather Honey.*—1st, F. F. Upton, Rugeley, Staffs.; 2nd, Jno. Berry, Llanrwst, N. Wales; 3rd, Wm. Dixon, Beckett Street, Leeds.

Class 414.—*Honey Trophy (Attractive Display in any Form).*—1st, R. Brown; 2nd, C. Lodge; 3rd, J. Pearman; c., R. Brown.

MISCELLANEOUS.

Class 415.—*Beeswax (Not less than* 2 *lb.).*—1st, C. Lodge; 2nd, Jno. Berry; 3rd, E. C. R. White.

Class 416.—*Beeswax (Not less than* 3 *lb., in Shape, Quality, and Package Suitable for the Retail Trade).* — 1st, Jno. Berry; 2nd, E. C. R. White; 3rd, J. Pearman; r., J. Boyes.

Class 417.—*Honey Vinegar* ($\frac{1}{2}$-*Gallon*).—1st, G. W. Kirby; 2nd, J. Gray, Long Eaton; 3rd, C. Lodge.

Class 418.—*Mead* ($\frac{1}{2}$-*Gallon*).—1st, R. Brown; 2nd, T. H. Geary, Enderby, Leicester; 3rd, J. Pearman.

Class 419.—*Exhibit of a Practical or Interesting Nature Connected with Bee Culture.*—Equal 1st, F. W. L. Sladen, Ripple Court, Dover (appliances for queen-rearing) and Arthur Wood, Crouch End, London (honey, confectionery, and condiments).

Class 420.—*Exhibit of a Scientific Nature not Mentioned in Foregoing Classes.*—No awards made.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

GETTING BEES INTO SUPERS.

[5934.] This is the season when all bee-keepers anxiously desire that their bees should expend as much of their energies as possible in the upper chambers of the hive.

The stronger colonies, when time and opportunities allow, generally follow out an almost natural instinct and readily begin to store all the superfluous inflow there. But many stocks of the shyer or duller sort seem to want some coaxing when they sulk too persistently below. Here are five aids to securing this much-to-be-desired end when working for section-honey: — 1. Shake bees from a frame or two, and let them run into the section-rack late in the evening. Quickly replace that receptacle in position, when at least a number of the shaken bees will stay aloft and become familiar with the new quarters offered them. The chances are that they will soon quietly begin building comb and storing honey. 2. Place a very small patch of brood temporarily in a corner of the super in such a way that it can be quietly withdrawn after a few days. Bees seldom neglect brood in a hive, and so, if they are sufficiently strong to work in supers, they will attend it, and thus familiarise themselves with these new quarters. The habit once acquired, they persist in ascending and store there. 3. When making up supers place in each rack one or two partly-completed sections, held over from the previous season, in the centre. The smell of the "bait" honey is a great attraction, and bees mount up to inquire as to this likely source of income. These "bait" sections are a good means of encouraging bees to take to the supers as soon as there is an income. 4. Acting on the well-known fact that bees work far more readily with frames of combs than sections, it is a common practice with many to place on a box of shallow-frames early in the season as a super, and, when it is fairly taken to, to replace it during an inflow with a rack of sections. Bees make no demur, but go on quietly storing in the new super as if there had been no change. 5. Carrying out this principle, it has been attempted lately to attract them up, working with a combination of the two styles of supers. While the super is mainly made up of sections, two combs of the same depth take the place of the outside row. This not only draws up the bees, but enables more complete sections to be secured at the end of the season. Very frequently these outside rows are the weak ones in a rack, especially at the end of the season. Heather-men have an opportunity of testing this device this season yet. In earlier districts it may be too late. I hope to revert to this point later, because I think there is in it a large amount of possibility, should proper supers be devised for thoroughly carrying it out to a successful issue.

Paper Hives.—Quite recently I observed some German intimates that he makes his hives of paper. He soaks a lot of paper, works it together into a pulp, pours it into moulds, leaves it to dry, and the result is "paper boards," which he fixes up into hives. If well painted they last a long time, he says. If so, this is a simple way for cottagers to provide themselves with cheap modern hives! But what I have to point out is that the idea is not new. It is, indeed, a century old, at least. I can give chapter and verse for the assertion. "Mr. Drewitt, Paper Mills, Weir, can supply square pasteboard hives at *sixpence each.*" The advertisement is one hundred years old, so no moderns need apply at above address.

Bee Paralysis.—This disease is seldom made prominently manifest in this country, but a case of it came under my notice last spring. The bees on coming out seemed to move tremulously, crawling along the flightboard in a dazed and crippled way as if uncertain where to go, and how to accomplish their journey. Feeble attempts were made to take wing, but these proving futile, they crept dazedly away, generally to die, for few of the worst cases returned to the hive, and the proportion lost was considerable, so that the population was rapidly decreasing. But with the advent of warm sunny weather, and nectar-bearing plants, the symptoms rapidly disappeared, and the colony became fairly strong for surplus-gathering.

Strong Colonies.—Some may set down the following as simply theorising, others may accept it as matter of fact; I give it as the fruits of deduction derived from experience:—A colony of 20,000 bees is not a strong one, but it will gather in a given time 1 lb. of honey. One of 30,000 may be set down as only medium strong, but under similar circumstances it will gather 3 lb. of honey. A hive of 40,000 bees may be set down as strong, with perhaps a qualifying adjective in front. It will in the same time gather 8 lb. of honey. A fourth colony, numbering 50,000, is really strong. It will collect 12 lb. in the time the others will be in storing 1 lb., 3 lb., and 8 lb. The ratio of increase will diminish rapidly after this for every 10,000, and I question if one of 60,000 will not gather as much as one very much more numerous.

The saving clause of *ceteris paribus*, however, comes in all through, because the gross population of the hive is only one factor in the estimate, and there are others. I am safe in saying that thousands alone will not roll in the honey, for it depends to a considerable extent on the proportion of young active foragers able to devote their full energy to honey-gathering from the fields. Say that it takes 5,000 bees to gather 1 lb. of nectar. Owing to the state of the brood-nest the larger colony may furnish, not only relatively but absolutely, the smaller number of bees intent

only on honey-gathering. Therefore, it behoves all to have not only bees in the hive during a full flow, but to have them of an age when they can put their best foot foremost in actively carrying in nectar.—D. M. M., Banff.

INCREASING OUR COLONIES

WHILE CONTROLLING SWARMING.

[5935.] Referring to the article by "Heather Bees" (5904, page 216), the plan he proposes will work very well and can be done at any time after the excluder has been on twenty-one days; that being the time required for all eggs and brood in the upper hive to hatch. With regard to drones, they need not be confined. If the brood-combs have been built from full sheets of foundation, there will not be a great many drones in the hive. These can be readily trapped in the following manner:—Bore an inch auger-hole about an inch above the excluder, and place a drone-trap over the hole, on either end of the trap drive a nail, and into the hive drive small staples the proper distance apart on which to hang the trap. The division should be made and sections put on a few days, certainly more than a week, before the colony is taken to the heather. A super-clearer can be used, as suggested, to get the bees out of the top hive; but I prefer shaking the bees from the frames in front of entrance to the hive and let them run in, as in hiving a swarm. If the season has been a favourable one, the combs in the top hive will contain a good deal of *sealed* honey which should be extracted, and the combs containing unsealed honey should be given to weak colonies to clean up. If managed in this way, and the heather is in bloom, and the weather fine, I have no doubt a strong colony that has not swarmed would fill two racks of sections at least.

In consequence of being surrounded with houses, and my bees being in a small yard, there is no place for a swarm to settle; they come out and are lost. This year I have adopted the following plan, not wishing to increase:—As soon as the bees begin to get crowded, I put the queen and frame of brood in a new hive, filling up with full sheets of foundation, the latter having a queen-excluder both under and over the hive, and the old hive above. A drone-trap is fixed as described, and, as will be seen in the photograph sent, the first super is put on in the usual way, and raised with the old hive. After giving sufficient time for the foundation to be drawn out (ten or twelve days), I remove the upper excluder, as I find the eight-frame dovetail hive with Hoffman frames, $9\frac{1}{8}$ by $17\frac{5}{8}$ inches (the size generally used in America), is not nearly sufficient for a prolific queen. I will give particulars of dates and working of the hive used here, which has fully answered my expectations. A good queen keeps an eight-frame hive filled with brood during the time honey is being collected, and very little honey is stored in it, so that I winter with a shallow-frame super on top, and in this way no syrup-feeding is necessary either in autumn or spring. This hive was examined October 10, 1904, and was not interfered with until April 23, when I found brood in many frames in the super, and saw the queen up there. I cleaned the floorboard, and as there was plenty of honey did not examine again until May 12, when, having found all as I could wish, I put an excluder between hive and super, taking care the queen was below in the hive-body. The bees worked well and were strong, and, on May 28, I put an excluder on the *floor-board*, and on it a new hive with a frame of brood with the queen, filling up with frames of foundation. An excluder was put *on* the top of the new hive, and the old hive placed on it. The excluder that was between it and the super was removed. On June 3 I raised the super and put another under it with full sheets of foundation; nearly all the brood in old super had hatched, and three-parts of the combs were filled with honey. On June 18 I took the old super off and found the frames filled and sealed to the bottom. The other super given on June 3 was filled with beautiful white combs and nearly filled with honey, some combs filled half-way down. I removed three frames of sealed brood to strengthen a queenless colony, substituting frames of foundation in their place. June 23.—The super put on the 3rd was sealed and ready to come off. If all is well, I will, at the end of season, report the amount of honey obtained.—JOHN M. HOOKER, Philadelphia, June 23.

A PEREGRINATING SWARM.

[5936.] We have just had an experience with a swarm which, I think, must be almost unique. A colony of Italians swarmed on the morning of June 25 (from a non-swarming hive) and settled in an apple tree a few yards off. The bees were hived in a skep and left to settle down, the queen being seen in the skep. In about two hours they decamped unseen; but the loss was soon discovered, and during the afternoon they were located in the roof of a thatched cottage about a quarter of a mile away. It was impossible to get at them, and they were therefore abandoned as lost. On the following day, however, the whole swarm was seen to leave the roof and settle in a garden near by. Before arrangements could be made for securing them they had again taken wing and com-

pletely disappeared. Nothing further was heard of them until the 29th, when about 9 a.m. they were discovered quietly clustered in *the exact spot they had originally chosen*, close to their hive. It was at first thought that a second swarm had issued, but an examination of the parent hive proved that this was not the case. In their four days of wandering they had evidently not been able to find congenial quarters. Name sent for reference.—WILTS, July 1.

THE "CLAUSTRAL" DETENTION-CHAMBER.

A BEGINNER'S EXPERIMENTS WITH IT.

[5937.] I only commenced bee-keeping last year, and my inexperience may have led me to consider my experiments of more interest than they really are, but I give them for what they are worth.

I started the season with two stocks, which I increased to three by artificial swarming (as per instructions in "Guide Book").

The third hive then started queen-rearing. It consisted of five frames of brood, a frame of foundation, and old bees of stock No. 2 (not a strong stock). It was at this point I decided to experiment, and use hive No. 3 entirely for queen-rearing.

Having two "Brice" nucleus hives, I fitted them with "Claustral" detention-chambers, and when the queen-cells in No. 3 were ripe I removed four frames with adhering bees, placing two frames and a queen-cell in each nucleus (referred to as Nos. 1 and 2), and then shut them up. I kept the detention-chambers shut until the queens hatched safely. The bees were none the worse for their confinement. All dead bees and rubbish had been turned out of the hive into the "chamber." I was unable to place the nuclei more than 12 ft. from parent hive, and I am doubtful if queens could have been safely reared without the "chamber" with such weak nuclei, for the weather was unusually cold and wet, and a loss from bees returning to parent hive would have been serious. In fact, I should not have attempted to rear more than two queens.

The queens mated safely, as did also the queen by then hatched in No. 3, which also had two combs, but which was by far stronger in bees, owing to the numbers clustering on the division-boards, and many more being on the wing, when I removed the other frames. Four weeks after forming nuclei I re-queened stock No. 2 from nucleus No. 1. Forty-eight hours before removing queen from nucleus No. 1, I closed detention-chamber. When removing queen I at the same time united the nucleus No. 1 with No. 3 hive. I did not move the nucleus gradually nearer No. 3, but trusted to the "detention" and a branch placed in front of entrance to No. 3 after uniting. I united in the evening.

I left the nucleus hive in its old position, shutting the chamber so that no bees could enter.

The next day many bees returned to their old quarters, ; but, finding no entrance, after a turn or two, went back to the hive with which they had been united. I watched the bees very carefully to make sure they returned to their new hive. I do not know how long a detention-chamber is considered necessary, but forty-eight hours would seem to do at a pinch. I think the detention-chambers saved me much in bees, time, and trouble, and certainly did not trouble the bees; after each period of detention there were never more than four or five dead bees. I send name, etc., for reference, and sign—G. A., Ventnor, Isle of Wight, July 1.

BEE NOTES FROM ROSS-SHIRE.

[5938.] The outlook here is very promising. June was favourable, and clover yielding freely, so that stocks had to be supered early in the month. Our first swarm came off yesterday (June 30). The hive had on six racks of sections above eleven standard frames. In one rack the foundation had not been drawn out, but there was honey in each of the other five, three of them very heavy, and a number of sections ready for sealing. Of my other colonies, each with nine to twelve frame brood-nests, none have as yet more than two racks filled with comb and honey.

In the above-mentioned hive the queen had the run of twenty-one standard frames up to the first week of June, and, as the hive was then getting crowded, and queen-cells under way, I removed all the brood-frames and started them anew on foundation. When I examined the new frames yesterday they were a sight worth seeing. With one exception the combs were solid slabs of brood, from side to side, and some up to top-bar. I again took away all their brood and put them back on starters, with supers replaced above. Should the queen fill this—the fourth brood-box—she will take rank with the one that heads the large frame stock. The good old queen, now in her third season, has beaten all the more thought-of last year's queens.

The stock covers twelve Quinby, fourteen-standard and twenty-two shallow-frames, with lots of worker brood in the standard and shallow-frames above the brood-nest proper.

Besides, I made an artificial swarm from the above, which is on twelve shallow-frames, with two racks full of comb and honey. The real honey-flow is still ahead, so we look for second crops should the

weather not take to "weeping" during July and August.—J. M. E., Ussie Valley, July 1.

THE "THOMAS" SWARM-CATCHER.

[5939.] Your good opinion of the above as expressed in a footnote to a correspondent of the B.B.J. a few weeks ago, has been verified by its satisfactory working in my apiary. I put a straw skep, in which the queen-cells were almost ready for capping over, on the floor-board of the "catcher," in such a manner that the bees could not get out excepting through the proper entrance. Their work was in no way impeded by the "catcher," and on Thursday, June 22, at 11 a.m., the swarm issued in my presence, and, after circling round for a few minutes, returned to the "catcher," on which they clustered. In less than thirty minutes the swarm was established in the three frames of foundation in the "catcher," and work was going on as usual. In the evening I put the swarm into a new hive, and placed it on the old stand.

For a day or two before the swarm issued the "catcher" acted as an ideal drone-trap.—H. Samways (Second-class Expert). Maesybont, Llandebie, June 23.

SWARM-CATCHERS.

[5940.] You will remember I wrote you and sent a sample of a swarm-catcher last year. I have improved it for this season, and have several on now. Yesterday being a very hot day, after two days' rain, I spent about an hour and a half in the middle of the day at the apiary, but no signs of swarming; but on going over the hives last night I found a swarm in the catcher with two frames out of the three packed with bees, and the foundation of one of them drawn out in some parts ¼ in. You can imagine my feelings when I found that the bees say that the catcher is a success. I intend leaving them just as they are in front of the hive for several days, to see whether the queen will start laying and brood be reared; then take the frames and bees out, and put in frames with foundation for the catcher to have a try at the second swarm with a virgin queen. Wishing you and the B.B.J. success at new offices.—William Thomas, June 26.

BEE-PACIFIERS.

THE CARBOLISED CLOTH AT FAULT.

[5941.] Carbolic acid does not mix properly with water, and soon dries up on a cloth. Glycerine is better than water as a vehicle for diluting the acid for quieting bees; it mixes with the acid and remains moist longer. Carbolic cloths require careful handling; unless the fingers are moistened with oil, the skin and flesh are eaten away where the acid touches. If any reader knows of a substance harmless to the skin that can be used as a bee-pacifier, I should be glad to learn of it. If it were not for the drawbacks named, the carbolic cloth would, I think, be far better than a smoker, being always ready for use.—W. J. Farmer, Redruth.

WEATHER REPORT.

Westbourne, Sussex,

June, 1905.

Rainfall, 3·62 in.	Minimum on grass, 45° on 7th.
Heaviest fall, 1·75 on 5th.	Frosty nights, 0.
Rain fell on 16 days.	Mean maximum, 65·3.
Above average, 1·53 in.	Mean minimum, 51·8.
Sunshine, 198·8 hours.	Mean temperature, 58·5.
Brightest day, 24th, 15·5 hours.	Above average, 1·5.
Sunless days, 3.	Maximum barometer, 30·36 on 23rd.
Below average, 32·2 hours.	Minimum barometer, 29·66 on 31st.
Maximum temperature, 76° on 27th.	L. B. Birkett.
Minimum temperature, 46° on 7th.	

JUNE RAINFALL.

Brilley, Herefordshire.

Total fall, 3.03 in.
Heaviest fall, .78 on 30th.
Rain fell on 15 days.

W. Head.

Echoes from the Hives.

Romford, Essex, July 1.—The weather conditions here are most favourable, and in strong contrast to those of last year, when everything that grows was scorched up. The limes are just coming into full bloom, and white clover is flowering abundantly. Thanks to the copious warm rains lately, there is every prospect of a grand yield from the above sources, and bee-men here who have fairly strong stocks are confidently expecting good "takes." Strong stocks are now doing well, and one master-hand in the town can already show a rack of sealed sections! Swarming in Romford commenced on June 22, and there have been several since that date. The plan followed here with swarms is to remove four frames of brood, with queen-cells, from parent-hive to form a nucleus, replacing these with full sheets of founda-

tion. We then cut out remaining queen-cells, and return the swarm. The young queens in nuclei will be allocated where required later on. Hoping to be able to send a good report when surplus is removed.—R. J. T.

Redruth, Cornwall, July 1.—I am glad to report that from June 22 to June 30 there has been a most excellent honey-flow here, and the prospects are very good, given a little warmer weather. The white clover has been out in perfection since June 22, and I never saw bees work harder than mine did on the 30th. Each of my stocks stored nearly a shallow-body full in the eight days mentioned, some of which were stormy. — W. J. FARMER.

Queries and Replies.

[3800.] *Swarm Destroyed in Transit.*—I should be glad to have, if you will kindly give me, your opinion on the following, not having heard of a similar experience:—A good-sized swarm issues at noon in dull weather; hived in skep at once after clustering. The swarm was then secured in skep with tent-cloth, and carried four miles on tricycle to my place, where I received them about 8.30 p.m. I immediately transferred the swarm into a ventilated skep, and covered its mouth with coarse cloth, the bees being very irritable and angry. Left them till 6 p.m. next day in dry room, when on examining them, I notice a quantity of sweet liquid had drained from skep, and, on removing the cloth, I found the swarm a wet mass, and bees practically all dead! Apparently the bees had vomited the honey they carried with them until the whole mass were suffocated and crushed with the weight of bees above. Can you say what has caused the trouble? My own opinion is that the bees were practically suffocated in the unventilated skep, tied over with a piece of tent-cloth (practically air-tight), and so got over-heated, and although I removed them into another immediately I received them, yet the mischief was done. If this is so, ought I to pay for them? I send name and sign — P. L. G., Birmingham, June 21.

REPLY.—But for your statement that "the bees were very irritable and angry" when received, we should at once have attributed their death to insufficient ventilation before the swarm reached your hands; it being a well-known fact that bees, if not properly ventilated, will regurgitate the contents of their honey-sacs in the way stated. Our wonder, therefore, is, first at the bees being alive and apparently active when received; and second, that they should be asphyxiated after being transferred to a "well-ventilated skep." You do not say if the skep was turned bottom upwards during their over twenty hours' confinement (as it should have been), nor can we judge of the "coarse cloth" covering used. Was it cheese-cloth, or coarse canvas, or what? These points should be made clear before blame can be safely apportioned.

[3801.] *Starting a Bee-farm.*—1. I should feel much indebted for advice in B.B.J. on the question of starting a bee-farm, and how much capital would be needed to begin in a small way, yet on a scale large enough for the bee-keeper (unmarried) to get his living by. 2. Is it advisable for a person entirely ignorant of bees and their management to risk his capital in purchasing bees and hives? I have looked carefully through Neighbour's "Apiary" and Taylor's "Bee-keeper's Manual," but cannot find a single allusion to those points on which a person thinking of starting bee-farming needs most of all to be enlightened. 3. I should also be obliged if you would tell me if I could spend my summer holidays on a bee-farm, with a view of learning something about the business. 4. Finally I ask—Is it absolutely necessary to undergo a course of practical tuition before venturing a start on one's own account? And 5. Do you know of a bee-farmer with whom one could work for a time? I send name for reference and sign—G. W. W., London, S.W., June 22.

REPLY.—1. To start a bee-farm on a sufficiently large scale for earning a livelihood by would need not less than £150. 2. It would be absolute folly for a person—as described above—to risk his capital in the way proposed. There is no business we know of in which it needs to "go slow" more than bee-keeping. You must learn "how to keep bees" before depending on them to keep you—in other words, whether you have the natural aptitude for the pursuit necessary before it can be made a success of. The books you name are twenty years behind the times, and you would need to be up-to-date in everything. 3. We might name a suitable place if you decide to carry out this intention. 4. Yes; absolutely necessary. 5. You could probably ascertain this through our columns if the need arose.

[3802.] *Transferring Bees to Frame-Hives.*—May I ask for advice in the following case?—Early in May last I procured an established stock in a skep, which I placed above top-bars of frame-hive in accordance with instructions given in "Guide Book." Eight of the frames were furnished with fully built-out comb, and in the two centre ones I put new foundation. On examining the hive on Saturday

last, I found the skep much heavier, but although the frame-hive was full of bees, no attempt had been made to draw out the foundation, nor had the queen gone down. Will you please say if it will be advisable to drive the queen into the new hive, and, if so, what is the best time of day to do this? I know really nothing about bees at present, but I intend to learn, and with this end in view have obtained the "Guide Book," and all essentials recommended therein. I am also taking both your papers regularly, the query portions of which I am carefully keeping under a classified index, as, in a few years, these will form a most important work on "what to" and "what not to do" in bee-keeping. I enclose my card, and sign — A WORKER, Moseley, Birmingham, June 26.

REPLY.—We should let the skep remain as at present, because it is certain that the bees will start work in lower hive—if the latter is full of bees as stated—now that honey is being gathered, and weather is fine. Your attempt, as a beginner, to drive the bees and get the queen below might easily end in disaster.

[3803.] *A Beginner's Troubles. — Queen Lost after Examining Hive.*—In March last I examined my single hive and found the bees apparently all right with plenty of brood and bees. I looked through the hive again on April 15, but there was no brood in combs, and I could find no queen. I therefore wrote for one, and got it on April 27, when I introduced same as directed in "Guide Book." A week later I inspected the combs again, but could find no trace of queen or brood. I then arranged with one of your advertisers to let me have an Italian queen for 7s. 6d., which duly came to hand on May 8. Early next morning I drove the bees into a box, and, after keeping them in the cellar for a couple of hours, I dropped the Italian queen in among the bees and left them for another two hours, after which time I placed the box containing queen and bees over frames, letting them all run down into the hive below. Eight days afterwards I looked again, and found eggs in brood-frames, so thinking they were all right, I did not trouble until June 4, when an examination showed only about a dozen capped cells of brood on each side of the two centre frames, and these were dotted here and there with drone-brood in worker-cells. I therefore informed the dealer from whom I got the queen, and he asked me to return her; but after carefully examining the hive I cannot find her anywhere. I should, therefore, be glad to hear what you think of it. I am also sending a bee along with the two drones, which the other bees were throwing out of the hive-entrance on Monday morning as though it was not fully developed, although alive. The bees have repeatedly cast out white grubs or half matured larvæ, and they are continually carrying in pollen. I need hardly say that I am only a beginner. I send name, etc., and sign—STAFFORD, Walsall.

REPLY. — It seems clear that your troubles have all arisen from the first examination of combs at beginning of March last. At that time the bees were no doubt doing well and thriving, but untimely or awkward manipulations of stocks by novices so frequently cause loss of queens, and consequent loss of a whole season, that we cannot too strongly deprecate such. An experienced bee-man never opens a hive unless there is a need for doing so, and beginners should, bearing this in mind, let well alone. We trust that our correspondent's unfortunate experience will not deter him from continuing his efforts on safer lines. A beginner should be content with simple items of bee-management, involving less risk to the queen-bee, for on the well-doing of that single insect depends the welfare of the whole colony. To sum the matter up, it would appear that after loss of the parent-queen in March, and the subsequent failure to safely introduce another queen on April 27, there was a further failure in the attempt to get an Italian queen permanently accepted by the bees. If this is so, their refusal to adopt the Italian mother may be in some degree accounted for by the unorthodox method followed in introducing her. Anyway, we cannot diagnose what followed from scanty details furnished only by supposing that there is now either a fertile worker or an unmated queen in the hive, seeing that drone-brood is being raised in worker-cells. The two normal drones, and the diminutive one—bred, no doubt, in a worker-cell—are of the common or native variety.

[3804.] *A Beginner's Queries.* — I am a novice at bee-work, having started with one hive this spring. On Friday, June 23, hearing that a swarm of bees had passed a neighbour's house, I was in doubt whether they came from my one hive (a very strong stock). I, therefore, examined my hive to-day, and found a goodly number of bees in top super of shallow-frames, a fair number in the under-super (sections), the brood-chamber also being well packed with bees. I did not stop to take out any of the brood-frames, as having removed the two supers on to stand, the air was getting a trifle "lively" with bees. I noticed, however, that the end frames of the ten in body of hive contained capped honey, and all frames seemed fairly full of brood and honey, judging from a look down. I therefore ask:—Should any of the frames be removed and replaced by foundation and the honey extracted? I noticed that the

bees had done very little in the sections, but the shallow-frames were in various stages, four of them being almost completely filled and capped. Should these be removed and replaced by foundation, or had I better wait whilst the ten frames are completed? I presume, not knowing whether my bees swarmed or not last week, it would be inadvisable to create an artificial swarm? Thanking you in anticipation of reply, I send name and sign—A. K., New Barnet.

REPLY.—There is no need to do anything under the circumstances, beyond taking care that the bees have storage room for honey-gathering. The season is now more than half over in the London district, and if the box of shallow-frames is filled and the rack of sections completed, it will be about all they will do this year. If you do any artificial swarming, it will put a complete stop to honey-gathering. Any operation of that sort had, therefore, better be deferred till the supers are removed.

[3805.] *Preventing Drone-comb.*—1. Will you please tell me if it is possible to prevent the bees building drone-comb when only "starters" of foundation are given? I put two frames into each of three hives, with starters of worker-foundation, and in each case the continuation of comb is being built of drone-cells. I have not put any "ends" on these frames in order to contract the space and get worker-comb, but this does not seem to avail. Can I do anything else? 2. From one of my stocks, which has already swarmed twice and been put back, I have cut out over thirty queen-cells. Is not this an abnormal number? They have two supers, one above and one below, but will not touch either. They seem to prefer swarming.—PUZZLED, Wilts, June 24.

REPLY.—1. If frames are spaced $1\frac{1}{4}$ in. from centre to centre, instead of the ordinary distance, no drone-comb will be built. This narrower spacing can be secured by using the "W.B.C. ends," as shown in "Guide Book" (page 46). 2. Yes; the usual number of queen-cells found, after the issue of natural swarms, is from four to nine.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. **Entries closed.**

July 19, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and appliances, in connection with annual flower show. Three open classes, two local classes, and one for members of L.B.K.A. Bee demonstrations, lectures, etc. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la Zouch, Leicestershire. **Entries close July 17.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Beekeepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

July 27, at Cambridge Honey Show of the Cambs. and Isle of Ely B.K.A., in conjunction with that of the Agricultural Society, held by permission in the grounds of G. E. Foster, Esq. Eleven classes, including one for trophy of honey (five prizes), and two open gift classes (with free entry) for single 1-lb. section and single 1-lb. jar extracted honey. Schedules from G. E. Rogers, Hon. Sec., "Beeholm," Newnham, Cambs. **Entries close July 22.**

August 2, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 26.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26**

August 3, at Kensington Meadows, Bath—Show of Bees, Honey, Hives, and appliances in connection with the St Saviour's Horticultural Society. Six open classes for honey, etc. (including honey trophy), seven local classes. Schedules from C. J. Calvert, Hon. Sec., 10, Eastbourne Street, Bath. **Entries close July 24**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Sections, Shallow Frames, Extracted Honey, light and dark and granulated Beeswax, Instructive Exhibits in Bee Culture, etc., and Special County Class for Trophy. **Entries finally close July 15.**

August 7, Bank Holiday, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Open classes for Extracted and Comb Honey. Schedules from Hon. Sec., C. J. Cooke, Edgefield, Melton Constable. **Entries close July 28.**

August 7 (Bank Holiday), at Cambridge—Honey Show of the Cambs. and Isle of Ely B.K.A. Nine classes, with good prizes, including one for "Display of Honey." Prizes 30s., 20s., 15s., 10s., and 5s. Also open gift classes, with free entry, for single section and single 1-lb. jar extracted honey. Five prizes in each class. Schedules from G. E. Rogers, Hon. Sec., Beeholm," Newnham, Cambridge. **Entries close August 1.**

August 7, Bank Holiday, at Lichfield—Honey Show in connection with that of Lichfield Floral and Horticultural Society. Two classes for members of Staff B.K.A. Six open classes for Honey, Bees, and Wax, and two open cottagers' classes. Ten guineas and six medals offered in prizes. Schedules from F. J. Hall, City Station, Lichfield. **Entries close July 29**

August 9, 10, and 11, at Hull.—Show of Honey, Bees, Hives, and appliances in connection with the Yorkshire Agricultural Society. Nine classes, with liberal money prizes, for hives, bees, honey, and beeswax. Schedules from the Secretary, John

Maughan, Blake Street, York. **Entries close July 1, or at late fees to July 8.**

August 10, at Madresfield, Malvern—Annual Show of the Worcestershire Beekeepers' Association. Open class. Schedules from Mr. A. R. Moreton, Hallow, Worcester; or Mr. G. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries close August 9.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23, at Lancaster. — Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. Open Classes for Extracted and Comb Honey, also Beeswax and Produce. Four silver and bronze medals and other specials. Schedules from Thos. Armitstead and Son, Auctioneers, Lancaster. **Entries close August 14.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 2 to 9, at the Agricultural Hall, London. Honey Show in connection with the Confectioners', Bakers', and Allied Trades Annual Exhibition and Market. (See large advertisement on page 1.) **Open to all British Bee-keepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1 lb. jars and three 1 lb. sections; class for single 1 lb. jar and single 1 lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes, Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb. jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight. Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

Notices to Correspondents & Inquirers.

*** "Inspecting Foul Brood in Combs."—Referring to the mention of this in query 3796 (page 258), Mr. W. H. Halstead, Dovercourt, Harwich, writes:—"If Mr. C. P. Woodbridge will cycle to Dovercourt, he can be shown a specimen of foul brood in mild form, if he will intimate on p.c. when he might come."

J. P. (Polperro).—The bee has nothing worse than pollen grains on its body. Nothing at all to cause fear about parasites.

W. J. (Glam.).—Faulty Foundation. — We cannot guarantee sample as being pure beeswax; it would need analysis to be safe one way or other.

U. D. P. (Karno).—Buying Bees.—We are glad the matter has been amicably settled.

T. S. (Carlisle). — Bee-Forage. — 1. The sprig of bloom sent is the *Limnanthes Douglasi*, a very excellent honey-plant. 2. If you can send botanical name of the other plant we will refer to it, but local names are misleading.

Suspected Combs.

TIVROG (N. Wales).—There is foul brood in a few cells of sample, which is quite new comb. Nothing in unsealed cells but healthy-looking larvæ and pollen.

SHEFFIELD.—There is foul brood in a very few cells of comb sent, but bees were hatching out by the dozen during time comb was in transit. No doubt some hundreds of young bees were sacrificed by your sending a standard-sized comb full of sealed brood. If other combs are no worse than sample, and stock is strong, we should defer treatment till the honey-season begins to wane, then examine, and see how far the mischief has gone.

Editorial, Notices, &c.

THE BEE-SEASON & COMING SHOWS.

The exceptionally fine weather now prevailing all over the Kingdom has gladdened the hearts of bee-keepers, and will, no doubt, have aroused a perfectly justifiable impression that one of the old-time honey-seasons is within measurable distance. So frequent, however, have been the disappointments—from one cause or another—that those of us who were practised hands in the craft thirty years ago began to ask ourselves if a really good honey season of the old-fashioned sort was ever coming round again, or if such years as we have in mind had gone by for ever.

In the same way some younger hands of to-day have openly expressed the belief that seasons of "honey glut," as they were called, were simply figments of imagination existing in the brains of old bee-men, but having no reality in fact. Be this as it may, we go so far as to say there is every reason for believing that a very fine crop of honey will be secured this year. In saying this, we do not forget how frequently the good harvests promised have, from various causes, failed to realise; but we happened to journey over 200 miles from London northward on the 8th inst., and never, in all our experience, have we seen better or more abundant bee-forage on both sides of the L. and N.W. railway track than was visible in each of the counties passed through on the journey down. White clover and alsike was in full bloom in the meadows (where uncut) and pasture lands alike, and with bright sun and a temperature of over 70 deg. Fahr., it is safe to say the bees were in full work on it. Then, after a brief thunderstorm, accompanied (in Cheshire) by a downpour of rain heavy enough to wash away any trace of honey-dew, if such existed—on the afternoon of the 9th—all was bright and warm again a couple of hours later.

We write these lines in West Cheshire, within fifteen minutes' walk of the spot where, twenty-one years ago, our own bees were located, and in that year gathered the finest crop of clover-honey it was ever our good fortune to secure in any one season. As we are now enjoying a short holiday in this neighbourhood, we availed ourselves of the opportunity for going over the old gathering-ground whereon our bees laboured in the days referred to. There was little change in the surroundings, while the bee-forage was plentiful as of yore, so that ordinary good fortune should give Cheshire bee-keepers, among others, a chance of harvesting some equally "good stuff" as the clover-honey which rather surprised our southern friends at the "Colinderies" in 1886.

This by the way, but what we desire to invite the attention of readers to is the chance a really good season affords for those fortunate enough to have their bees in proper trim for taking full advantage of the weather we are now enjoying, and making an appearance on the show-bench. We are also glad to announce that the directors of some important shows have realised the improved conditions with regard to the honey-crop, and are, in consequence, offering special inducements to would-be exhibitors. In this direction we have been requested to say that the date for closing entries for the show at Liverpool has been extended to July 18 without extra fees. The money prizes amount to £35, together with silver and bronze medals of the B.B.K.A. and of the Lancs. B.K.A. There are seven open classes for honey, wax, and bee-appliances, also for instructive exhibits connected with bee-culture and a county class for honey-trophy.

Another interesting announcement we have to make is connected with the important exhibitions and markets at the Agricultural Hall, London, in September next, of the "Confectioners and Allied Trades," and also of the "Grocers and Kindred Trades." It will be seen by referring to advertisement on page iii. that the entry-fee in all classes has been reduced to one shilling. This concession, along with other advantages offered, should have the effect of encouraging exhibits from all classes of the bee-keeping community, bearing in mind the very liberal money prizes offered in competition for honey, beeswax, and bee-products (no hives or bee-appliances). These amount to £50 at each of the two shows, and include a class for honey-trophy, with prizes of £4, £3, £2, and £1 at each show. The classes are open to all bee-keepers, and exhibits may remain at the Hall for staging at the second show if entered for both. Moreover, the prize-winners at the "Confectioners" are debarred from taking a prize in the corresponding class at the "Grocers," so that a second chance is offered of winning at the later show, and under more favourable conditions, seeing that winners of the earlier one are excluded by the terms of the rule just mentioned.

Full particulars will be found in schedules to be had on application from the Secretary, Mr. H. E. Rogers, Palmerston House, Old Broad Street, London, E.C., and we hope all our readers will do their best, by entering their honey for competition, to encourage the management in their endeavour to bring honey and honey products before the general public, and so extend the market for producers.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5942.] The "season" is fast passing away, as the limes are almost the only source in this district from which we get any surplus, except in cases of special forage, such as a chance crop of mustard, or a good aftermath of white clover. During the past few years our crop of white clover has diminished considerably, the farmers growing more of the red variety, also rye grass with some alsike clover in the mixture. Unfortunately, the latter does not grow up and bloom again, making the fields a bees' paradise in a few days, as did the white clover of the old style of farming. There is hope, however, for bee-keepers yet, as farmers will have perforce to return to the old-style leys to secure the necessary amount of "nodules" to liberate the food for the growth of succeeding corn crops.

Our friend Mr. Farmer speaks of tripod stands as being easy to "level." I have a few skeps on three-legged stools, and on my sandy soil, even with pieces of slate or tile under the legs, I have had them topple over during or after a heavy storm. This has never happened with a four-legged stand or stool.

A Medium Metal End Required.—A look through the competing hives at the Royal Show confirmed me in the opinion I have held for some time, that a medium-sized metal end is a great desideratum. With shallow frames spaced with wide ends the bees often build brace combs, and with narrow ends our combs when finished are thin and narrow also; hence we get more work in uncapping and extracting, and also less honey. I know there are points in favour of wide ends, especially on the show-bench, as extra ounces weigh with the judges in giving their decision. Again, eight combs are extracted more quickly than ten; but the beginner will find that the eight-frame box is not likely to give him good straight well-built combs, and it is for the benefit of new bee-keepers that we want Mr. Meadows (he is *the* tinman) to make us a medium "W.B.C." tin-end for our extracting combs. Before leaving the subject, may I say a warning word on the exhibition of very thick heavy combs? The practice of sending these, I think, should be discouraged, for have we not in the past had many cases of broken-down combs to deal with at shows, and has it not been in nearly every instance due to over weight? A 3lb. frame of comb will travel far more safely than one of 6 to 7lb., and the quality of the honey is just as good in the 3lb. comb as in one twice its weight.

Requeening.—The period of requeening will soon be with us, and I advise the novice to try using tobacco smoke when introducing queens. I have done so now for some years, as previous "notes" testify, and I have had invariably good success when tobacco smoke is used. In proceeding, first get your smoker well alight, put in a pinch of tobacco, roll back the quilt, and give a few puffs of smoke. This will drive the bees below. Then allow your queen to run down between the combs, followed by a little more smoke, replace the quilt and finally give two or three puffs at the entrance. The tobacco smoke has a sedative action on the bees, and is not easily fanned out of the hive, thus giving an equal scent to bees and new queen. Of course, the old queen, and also every queen-cell, must have been previously removed from the hive, or the expense and trouble will be futile.

A friend from Cheltenham "C.C." asks for information as to those fourteen swarms mentioned in my "Notes," page 252, B.B.J., June 29. He would like to know whether they "clustered" together, and how they were separated. Yes, three of them went together, as my man worked on the old style of leaving the first swarm where it settled and was hived. I myself, as soon as another swarm is on the wing, and appears drawing towards the same spot, remove the first to a cool, shady place in another part of the apiary. Then No. 2 generally settles on the branch of the tree from where No. 1 has been taken and is hived as quickly as possible. If obliged to use a ladder I shake the bees into a large skep, and hold it sideways, by this means getting a large part of the flying bees to settle in the hive before I bring them down. The swarm is placed on a square of strainer cloth ready to carry away to another spot if necessary. If two or more stocks swarm together and *settle* together, I shake part into one skep and part into another, and place them a yard or two apart. Sometimes one is fortunate enough to get a queen in each, but if in a short time one lot gets restless, I hunt out a queen from the other hive and place her with the restless bees (this is only the work of a few minutes), and then equalise the strength of the swarms by giving a handful or two to the weaker lot. There has not been a very abundant honey-flow for the past fortnight, until July 6, when matters improved somewhat.—W. Woodley, Beedon, Newbury.

INCREASING OUR COLONIES
WHILE CONTROLLING SWARMING.

[5943.] Having tried the plan described on page 202 of B.J. for May 25, I am sending a few lines on the result. It answers well with myself. I tried four of my lot, with the result that I took from them four brood-boxes nearly full of honey, while the body-box in each was nearly full of brood. In one top-box a queen hatched out, and I have kept her there with a few bees and thus started another colony. I have six "W.B.C." hives, made by an Exeter firm, that helped me to success; everything fits so well; in fact, everything I had proved to be as good as represented by them, which helps one in starting bee-keeping. I wish I had tried all my bees the same as the four mentioned; I should now have had them all boiling over with bees. The thing helpful about the plan is its simplicity, and with such strong lots there would be no fear of chilling brood. I therefore consider the plan has proved a complete success.—G. TURL, S.O., Devon, June 27.

USEFUL ODDS & ENDS ABOUT BEES.

[5944.] *Leaky Roofs.* — My method is very similar to the one mentioned by "F. J. H." in B.B.J. of June 15, except that I soak the calico (brown, at 2½d. per yard) in boiled oil first; then allow it to dry, and afterwards give a coat of paint. I never have a leaky roof, and know a bee-keeper who has practised this method for at least a dozen years with equally good results. Some readers might care to try this:—A pint and a half of linseed oil, one and a half ounces of candle grease, and two ounces of white lead, boiled together, and painted on brown calico while hot. After three or four days, when dry, give a coat of paint. This is a method used for waterproofing canvas canoes.

Waxing Foundation.—For the cottager or bee-keeper with few hives, it will be found eminently useful to fill a long, narrow bottle with pieces of beeswax. Place in a saucepan of cold water and heat until wax melts. Now take about six inches of glass tubing, and use as a dipper. By placing the forefinger tightly on the top of the tube, after it is dipped into the melted wax, it can be carried to the required position, and run into the groove by taking off the finger. I have used a small screwdriver, notched with a triangular file. Heated in a gas-flame, this makes an efficient appliance for embedding foundation.

Sparrows and Bees.—As my apiary is surrounded by houses, I have every opportunity of watching the mischievous sparrow. As a result of careful observation, I find the sparrow will take the drones, but not workers. I watched a pair last summer fetch dead drones and workers from the front of my hives. They also took maimed drones, but would not touch a maimed worker, although I purposely tried them. Neither have I seen them attempt to catch a bee on the wing.

Nature Study. — This subject is now adopted in many of our elementary schools, and to facilitate study various "Readers" are being placed on the market. Before me, as I write, is one published by Macmillan and Co., which contains four chapters devoted to "Bees and Bee-keeping." This is how the standard frame is described:—"It was a wooden frame, something like a slate frame, only it was filled with wire-gauze instead of slate." Then again—"The bees build their cells on both sides of this wire-gauze. They make their combs ⅞-inch thick with the wire-gauze partition, to form the base of the cells on either side"; and again on page 169 —"A sheet of wax, the exact size of the frame, is stamped out by machinery into six-sided cells, and this is fixed to the wire partition with melted wax." Just think of the harm this is calculated to do, and then I think you will agree with me that it is a pity the proofs were not referred to some practical man. I send name and sign—W. D., Bulwell, July 5.

BEE-NOTES FROM DERBYSHIRE.

[5945.] The bees in this district are now simply revelling in the excellent bee-weather. They have been doing very well for over a month past, and I never saw stocks build up better. Then a fortnight ago we got a good warm rain which freshened everything up beautifully. I know of two or three racks of shallow-frames being filled since then, so rapid was the inflow; I never saw honey come in more plentifully. Many fields are simply covered with white clover, quite a fortnight earlier than usual; not only so, but grass-cutting for hay is a fortnight later; therefore, with good bee-weather through July, there is promise of a record honey-season here, and, so far as I can judge, the honey is of fine quality.

I have one swarm worked on Mr. Alexander's plan as given in B.B.J., which has nearly filled a super. Another stock I allowed to swarm naturally in order to get queen-cells, but the swarm went back, having lost their queen, and the most puzzling thing about the affair is that I did not find a single queen-cell in the hive, sealed or unsealed. In addition to this misfortune, the queen had not laid for three days at least before this swarm came out, so I was a loser all round—my

best queen gone and no cell for a young one.

This spring I went to put a friend's hive straight; one he had bought just as it stood in the owner's garden. The super had been left on all the winter, and one comb that had dropped out of its frame was laid across three or four of the super frames, under this comb the bees had lived all the winter, and when examined there was brood on three of the frames in super. The combs in the lower brood-chamber were all eaten away by mice. This was on April 6, and there would only be about a pint of bees in the hive at that time. Now it is supered, and the stock is one of the hottest-tempered lot of bees I ever saw. The old bee-keeper who sold them said that the district was no good for bees, but my friend has a hive quite close to it that filled a super in nine days last month, so I do not call it a bad country for bees at all. — Tom Slight, Pilsley, Chesterfield, July 5.

EXHIBITS DAMAGED IN TRANSIT.

[5946.] I received my exhibit of mead from "Park Royal," this morning, per passenger train. It consisted of three strong bottles, and *two* of them were smashed. The packing seemed all right, but the railway treatment must have been simply outrageous. The exhibit was awarded a prize, and taking a modest view, I assessed the amount for compensation at 10s. It is small wonder that exhibitors are shy. Anyway, I shall be after this, as it is positively disheartening to have your exhibits treated in such a manner, and I do not expect I shall get any compensation. I enclose name and address, Messrs. Editors, while signing myself—Disgusted, Leicester, July 5.

SPARROWS AND BEES.

HOW BAD HABITS ARE ACQUIRED.

[5947.] During the cold wet weather early in June a quantity of drone-brood was cast out of one of my hives. A pair of sparrows, having partaken, got to like this, and stayed on, to discover that even mature live bees as food are possible, and easily obtainable. This pair of sparrows lived almost entirely in my apiary for three weeks, and when no brood or mature bees were to be found, they did not hesitate to dart for a flying bee, and carry off their prey to a cottage near by, where evidently they had a nestful of young. The numbers of bees caught by these birds must be very large. But there is, as usual, a moral viz., when any quantity of brood is thrown out of the hive, remove it immediately. Once, while I was among the hives, James the sparrow (cock-sparrows are called "Jims" locally), caught a bee, and was flying off with it when the insect stung him, making the bird scream with pain and spin on the ground like a top; but he soon recovered, and his equilibrium was not sufficiently affected to cure the bird of this bad habit. —W. Loveday, Hatfield Heath, Harlow.

PREVENTION OF SWARMING.

[5948.] Besides giving plenty of room inside, I think it is necessary to use hives with a loose outer case on the "W.B.C." plan. In single-walled hives the bees are simply roasted on a hot, sunny day. For general convenience and utility nothing can approach the loose outer-case type of hive. My working hives are all on this plan. I have a few nucleus hives on the other plan, for which purpose alone I consider single-walled hives are suitable. — W. J. Farmer, Redruth, July 8.

Queries and Replies.

[3806.] *Combs Destroyed and Immature Bees Cast Out from Hive.*—Herewith I send a piece of comb containing larvæ, which, together with young immature bees (sample enclosed), are being thrown out wholesale from one of my hives. There is quite a heap on the ground in front; a lot of the young bees lying or crawling about, and just moving their legs. I shall be most grateful if you would advise me on the best course to take under the circumstances, as I have never before had such an experience. The bees have gnawed away the cells of several of the combs down to the mid-rib, as you will see by sample, and the whole surface of all the combs has the same peculiar appearance as sample. The stock in question was formed on June 22 from the parent-combs (four and five respectively) of two stocks which swarmed on that day; these combs being put in hive on a fresh stand, and the swarm hived in their old homes. Neither queen-cells nor eggs are to be seen in this hive, though there may, of course, be a virgin queen recently hatched. There is some food in hive, though very much less than I expected to find. Can it be due to shortage of stores?—C. D. G., Soham, Cambs.

Reply.—We have not heard of a similar case to the above, though instances of bees fighting among themselves have been reported. An inspection of comb and bees shows that the two stocks from the nine combs contained hatching brood of two distinct kinds of bees, one being the common brown kind, while the others were

fairly well marked Carniolans, and whether the combs or the young bees were offensive to the brown bees, or *vice versa*, we can only guess; but the appearances point that way. As a possible remedy for the trouble it might be worth while to try spraying the bees with very thin syrup scented with a few drops of peppermint.

[3807.] *Swarms Not Filling Sections.*—I have just started bee-keeping, and got my first swarm at the beginning of June. I put a super on about a fortnight ago, but though the bees are in the sections, they show no signs of drawing out comb, and I am afraid the swarm is too weak to do more than fill the frames in brood-chamber. I am very anxious to work it into a good stock for next year, so would you advise me to take off super, and try to increase brood by gradually adding the four extra frames in centre of body-box? There are only six frames in hive now. Then about August should I begin feeding the bees till the frames are full for the winter? I should be very much obliged if you could let me have an answer in next week's B.B.J. I send name and sign—EUPHEMIA, Stourport, July 7.

REPLY.—The sections had better be removed at once, and then give the other four frames, after fitting same with full sheets of foundation. If present weather continues, the bees should build-out combs and store sufficient food to winter on before the season closes. Failing this, they should be fed up in early autumn with the required amount of sugar-syrup. It is not uncommon for swarms to store no surplus honey the first year.

[3808.] *Strong Stocks Suspected.*—I herewith enclose samples of comb from two of my hives. A bee-keeping friend told me they were bad with foul brood. I wish to know if it is of long standing, and which has been diseased longest, if at all, as I would like to trace the cause of it. I have more hives, but these two appear to be worst. Bees are very strong, especially No. 2, which is full of bees working in two racks of sections. I had 80lb. off No. 2 last year. What do you advise that I should do? I wish to save bees if possible. I have taken your paper for six years and have found it of great value.—J. W. G., Kincardineshire.

REPLY.—Beyond a slightly suspicious cell or two, we find no foul brood in comb of either sample, nor can we account for death of larvæ therein without further knowledge of the stock than the few details given. Both No. 1 and No. 2 are very similarly affected, neither being worse than the other.

[3809.] *Queen Cast Out.*—Will you kindly inform me if enclosed queen is a virgin or an old one? I found it to-day on the floor-board surrounded by about twenty bees. This hive is doing well with three racks of sections on; top one now ready to come off. I have not opened hive except to put on racks since May 15. I am glad to say all my six hives are doing well, the other five each having two boxes of shallow-frames on and honey coming in fast. I have had no swarms yet this season.—OLD SARUM, Salisbury.

REPLY.—Queen sent is a full-sized fertile adult. You had better lift off surplus chambers and see if queen-cells are on combs; because, if so, all will go on well if resultant queen is safely mated, and there will be no interruption in honey-storing while a young queen is being reared.

[3810.] *Queen Killed and Cast Out.*—1. Can you tell me whether the enclosed queen is fertilised or not? She was reared in a nucleus, but a queenless colony refused her. 2. Can you say from what source the bees have gathered the enclosed propolis? Name sent for reference.—GILBY, Kirkby Lonsdale.

REPLY.—1. Dead queen sent bears every appearance of a virgin, but may possibly have been mated before being stung to death, as her appearance denotes. 2. Pollen similar to that sent is gathered from several kinds of flowers; we cannot, therefore, name the source from whence sample came.

[3811.] *Young Bees and Pupæ Cast Out.*—I have been much perplexed lately to find a number of very young bees, pupæ, and larvæ, cast out of one of my hives. Nearly all the bees were alive when cast out. Over a fortnight ago the hive was queenless, but had five or six frames with eggs, and young brood in all stages. The bees have reared seven or eight queens since, the first of which came out of its cell last Monday. I first noticed the young bees, etc., being carried out on that date, and it has been going on ever since. The hive contains plenty of food, both sealed and unsealed, besides which, I have been feeding slowly during the time the bees were rearing the queens; but stopped when the cells were sealed over. By same post I am sending some of the bees cast out during last night. All the ejected bees when found had their suckers fully out. I send name and address for reference, and sign—J. N. L., Ilkley, Yorks.

REPLY.—It is most difficult to account for young bees—mature and immature—being cast out as stated, without having full particulars of what has happened to the stock in question to explain matters. The bees (Carniolan hybrids apparently) have died, we should think, from want of food, but why this should happen is not

clear, unless the cessation of feeding mentioned may account for the mischief. We can offer no other explanation.

[3812.] *Swarms from Large Hives.*—I have only one hive, which I am working for extracted honey. The bees are very strong, and were on twenty frames of brood by the end of May; besides having ten standard frames of comb in a second doubling-box, about three parts full. I therefore, on June 10, raised the latter, and put a third doubling-box under it, with ten frames fitted with full sheets of foundation and placed a rack of sections on top of all, making four tiers of standard combs, ten in each tier, and one rack of sections. But, in spite of all this room, the bees swarmed on June 20, not having touched the second doubling-box given on June 10. The worst of the matter, however, was that the swarm flew off and was lost! Three days later I heard "piping," so removed all honey in top box, and cut out all queen cells in two bottom chambers. I found it rather a tough job handling such an enormous stock, being only in my first year of bee-management. However, I got through it at last, and also formed a nucleus colony by taking three frames of brood, etc., from lower body-box, and substituting frames fitted with "starters" of foundation. But, notwithstanding this, the bees swarmed again next day, that being the fourth day after the first swarm came off. The bees, however, returned to the parent hive after being in the skep for about an hour. I would now ask, if you will say: 1. What did I do, or leave undone, to cause the swarming? I may say that the front of hive was raised to admit air as per "Guide Book." 2. Was it not unusually soon for a second swarm to issue on the fourth day after the top swarm came off? 3. Is it likely the bees will swarm again? I see they are working well now, and I have lifted hives off floor-board about an inch all round with a block at each corner to carry same.—I send name and sign—A Beginner, Southampton.

Reply.—1. It is hard to say from a distance what you have done, or left undone, to cause the trouble. One thing, however, is certain, you have adopted plans that, for a first-year's bee-man, are rather startling in their unorthodoxy, and such as more practised hands would hardly dream of. But the queen-bee of your only colony must be a wonderfully prolific one, and it is a great pity you have lost her. 2. The giving of so many frames of comb would no doubt defer the issue of swarm for some days after the bees had formed queen-cells and made up their minds to emigrate to a new home, and this probably caused the delay of first issue for several days. 3. No; summing up your season's work, we fear it will not be so profitable as if ordinary methods had been adopted, and something less than forty standard frames and a rack of sections used on one stock. We shall be glad to hear the final result of your season's work later on.

[3813.] *Brace-Combs in Sections. — Renewing Brood-Combs.*—Will you kindly advise me on the following points? — 1. Though I use four-bee-way sections, full sheets of foundation, and tin separators, I find my bees often extend combs and build on to separators. How can this be avoided? 2. Combs in brood-chambers of some of my hives are old, and ought to be removed. If I put to one side of hive and use queen-excluding dummy till brood is hatched, queen will have no laying space. How is this difficulty to be overcome, and when is the change best effected? Section-racks are at present on all hives. 3. When examining hive in spring I thought I detected foul brood in some. A few capped cells were concave, and a very few contained putrid matter. I was not positively certain, so put on racks of sections, which are now partially filled. If I find it to be a slight case of foul brood, how do you recommend me to proceed? Is the starvation process certain and possible in autumn, or has any other foul-brood cure proved successful on trial in slight cases? An answer will oblige.—S. H. H., Ashford.

Reply.—1. If sections are carefully arranged in racks, and latter are properly made, no brace-combs will be built. 2. It is best to remove faulty or old combs when broodless, and replace same with a full sheet of foundation, hung between two straight combs in centre of hive. 3. After the honey-flow is over, remove all combs in which there is foul brood before packing down for winter, if the disease is not found to be extending. The "cure" you name is not a cure at all, only a preventive.

[3814.] *Transferring from Skeps to Frame-hives in July.*—I have two stocks of bees in straw skeps side by side, neither of them working in supers, and I should like to drive the bees of both skeps into one frame-hive, but would first ask: Do you consider this advisable, and, if so, would it be best to place an excluder-zinc on frames, and put the straw skeps one above the other over frames for brood to be all hatched out? A reply in the B.B.J. will much oblige. And also, can you give me name and address of secretary of Northants B.K.A.? I send name, etc., and sign—L. A., Peterborough, July 1.

Reply.—It is now too late in the season to carry out the plan of allowing bees to

transfer themselves from skeps to frame-hives, as directed on page 140 of "Guide Book." Your best course, therefore, will be to defer driving the bees till all brood in skeps has hatched out, then drive both lots and run them into the frame-hive. The latter will need to be fitted with full sheets of foundation, and the bees liberally and rapidly fed, so that combs may be built out and stores sealed over before packing down for winter. Mr. R. Hefford, Kingsthorpe, near Northampton, is hon. sec. of the county B.K.A.

[3815.] *Queen Killed and Cast Out.*—Enclosed herewith is a queen-bee which I found this afternoon lying on the alighting-board of one of my hives. There were several worker-bees around her, which drew my attention to that hive. Can you tell me the probable reason of her being thrown out? Also is she a young or an old queen? She was not quite dead when picked up, so I kept her warm in a match-box, hoping she might revive. The hive had not been opened for some days, so she can hardly have received any injury through manipulating.

I regret not having seen one of our Editors when up at the Royal Show last week, Mr. Broughton Carr being engaged each time that I was in the honey tent. —Mary Spencer, St. Oswald's Apiary, Holywell, Hunts, June 30.

Reply.—1. The dead queen sent was of full length, and, but for her rather slender shape, she would have been a fine queen. There were no signs of her having been "balled," nor is there any outward sign of injury. An examination of the frames might explain matters, but, as no details are given of the past history of the stock, it is impossible to judge the cause of death safely from a distance. We share your regret with regard to visit to the Royal Show. On the first day we were busy all day judging, and on our next visit on Thursday were engaged examining candidates for the B.B.K.A. experts' certificates.

[3816.] *Swarm Building Combs in Tree.*—On returning home to-day I found a swarm clustered on a tree in my orchard which had been hanging there for two days. I do not know out of which hive they had issued, or whether it is a stray swarm, and so ask:—1. Can I take it that the bees are not gorged with honey as when swarming? They appear to have no intention of taking wing, but are working as if from a hive, and have doubtless built some combs on the tree. 2. The question therefore arises: Will not the bees, if hived and placed on a stand in my apiary, return to the tree, which is some distance from where my other hives stand? I shall be glad if you will give me your opinion what is best to be done, or what will happen if I leave them alone. The bees, not being now gorged with honey, might be troublesome, and I should not like my gardener, who assists me in hiving swarms, to be badly stung. I send name and sign—S. E., Hawkhurst, Kent.

Reply.—1. Yes; it is fairly certain that the bees have resolved on an open-air dwelling for the time at least, and will start breeding and honey-storing in the tree-combs, of which not a few instances are recorded. 2. It would not be a difficult task for any bee-expert to remove the combs and bees and transfer them to a frame-hive, as bees working in the open are not difficult to handle as a rule. Cannot some help of this kind be got if it is beyond your own powers? If so, a lot of trouble might be saved.

[3817.] *Excessive Swarming.*—My bees have never swarmed so much as this year —most of them having done so three times. One hive, of ten frames, sent out a large swarm which filled a skep with comb in a week. The parent hive has swarmed three times since then, in spite of having nine shallow-frames, and two racks of sections, and is now simply "boiling over" with bees. Also can you account for the large number of drones present in all my hives? I never remember having seen so many. I send name and sign—Nasturtium, Canterbury, July 7.

Reply.—If the stock referred to did not have the three after-swarms returned, it was a very unusual case of excessive swarming to have so large a hive "now boiling over with bees" after sending out four swarms in all. The cause of your superfluous drones is too much drone-comb in the hive. It should be nearly all cut out. Regarding your other query, we know of the bees named, but that is all we can say concerning them. Bees, like human beings, are not immune from disease, and never will be; anything said to the contrary, is, therefore, absolute nonsense.

[3818.] *Uniting Bees in "Wells" Hive.*—On a former occasion I consulted you regarding the removal of queen-cells from two swarms in a "Wells" hive (see pages 188 and 200). I have carried out the system, I think, successfully thus far. You suggested that sometimes the bees seemed to give up the idea of queen-breeding. Not only so, but, in my case, one of the colonies seems to have given up the idea of even producing workers, so that when last examined (about a week ago), there was practically no brood, and the whole ten frames were almost filled with honey. Both colonies have section-racks on, but this

particular colony has not done much in them; the other has done better, although also well stocked with honey below. Now, what I would like your advice about is—Would it be expedient to remove the perforated division-board, and as many of the frames of honey as thought advisable, and substitute a few full sheets of foundation, and unite both lots into one colony? Would there be any danger of them swarming unless one of the queens was removed? I will consider it a great kindness if you will tell me in your next issue what is my best course, and will wait for your advice before taking any step. I send name for reference.—R. M. B., Bridge of Allan, July 7.

REPLY.—If you take the precaution to remove the worthless queen that has ceased breeding before uniting the bees of both compartments, it will no doubt be advantageous to take the proposed course. Nor need there be any fear of the bees swarming if they have comb-building to do.

[3819.] *Utilising Queenless Bees by Uniting.*—I am in a difficulty concerning a stock of bees in a straw skep. They swarmed and lost queen; the swarm then returned to the parent hive, only, of course, to swarm again. I therefore tried to prevent this by placing the skep on top of a frame-hive furnished with built combs, hoping that bees would descend into the frame-hive below next day, which they did. I then removed the skep back to its old stand, and covered the frame-hive up warmly. Both hives worked well, until an examination revealed the true state of the case. I found the bees in skep had deserted the small rack of eight sections, which they had three-parts filled before they swarmed. On the other hand, the bees in frame-hive had gathered a fair amount of honey and stored same in frames, but I noticed they were restless and unsettled, and showed signs of queenlessness. On a further inspection, I found drone-brood in all combs, and queen-cells on one comb, and they have now no eggs in hive from which to raise and queen. Seeing, therefore, that one can only work for either honey or for stocks, I ask which course is best for me to follow? Shall I put the skep on top of frame-hive and let the bees transfer themselves, or give them a frame containing brood and place eggs from a neighbour's hive and let them raise a queen for themselves, and by this means still keep two stocks? In other words, shall I work for honey or stock? The case is rather a difficult one, and I trust you will excuse me if I have not made myself clear. But please try and gather what you can from my remarks and let me know what I had better do? I send name and sign S. B., Manchester, July 6.

REPLY. Try the latter course of the two plans proposed. If the bees fail in raising a queen, the skep may then be set above the frame-hive and the two lots united.

Echoes from the Hives.

Hatfield Heath, Harlow, July 10, 1905.—In this district the season has been a most indifferent one, from the honey-producer's point of view, while the large numbers of stocks of bees found dead in April from easily preventable causes was other than creditable in these progressive days. My own few stocks were early ready for anything that might turn up, and they all swarmed in May. I had young queens laying well at the end of the month, and shallow-frames ready for extracting in May, too; but—it is the small words that have it in our language—during the week early in June, when the sainfoin was at its best, it not only rained the whole week, but was cold also. Then came the mower at the end of that chapter, for white clover is not now cultivated here. There are still possibilities, but the appearance of the aftermaths does not allow one to rely much upon the second crops. Strong stocks well kept have only been able to store thirty-five pounds of surplus honey. The demand for honey is unusually great, and several bee-keepers are buying to fill orders.—LOVEDAY.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 13 and 14, at Grantham.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. **Entries closed.**

July 19, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and appliances, in connection with annual flower show. Three open classes, two local classes, and one for members of L.B.K.A. Bee demonstrations, lectures, etc. Schedules from J. H. Dunmore, Secretary, Alandale, Ashby-de-la Zouch, Leicestershire. **Entries close July 17.**

July 20, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec, Kingsthorpe, Northampton. **Entries close July 15.**

July 26 and 27, at Cardiff.—Glamorgan Bee-keepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes

for Honey, £1. 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

July 27, at Cambridge.—Honey Show of the Cambs. and Isle of Eley B.K.A., in conjunction with that of the Agricultural Society, held by permission in the grounds of G. E. Foster, Esq. Eleven classes, including one for trophy of honey (five prizes), and two open gift classes (with free entry) for single 1-lb. section and single 1-lb. jar extracted honey. Schedules from G. E. Rogers, Hon. Sec., "Beeholm," Newnham, Cambs. **Entries close July 22.**

August 2, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 26.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, at Kensington Meadows, Bath.—Show of Bees, Honey, Hives, and appliances in connection with the St. Saviour's Horticultural Society. Six open classes for honey, etc. (including honey trophy); seven local classes. Schedules from C. J. Calvert, Hon. Sec., 10, Eastbourne Street, Bath. **Entries close July 24.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Sections, Shallow Frames, Extracted Honey, light and dark and granulated Beeswax, Instructive Exhibits in Bee Culture, etc., and Special County Class for Trophy. **Entries finally close July 18.**

August 7, Bank Holiday, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Open classes for Extracted and Comb Honey. Schedules from Hon. Sec., C. J. Cooke, Edgefield, Melton Constable. **Entries close July 28.**

August 7, Bank Holiday, at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. Nine classes, with good prizes, including one for "Display of Honey." Prizes 30s., 20s., 15s., 10s., and 5s. Also open gift classes, with free entry, for single section and single 1-lb. jar extracted honey. Five prizes in each class. Schedules from G. E. Rogers, Hon. Sec., Beeholm," Newnham, Cambridge. **Entries close August 1.**

August 7, Bank Holiday, at Lichfield.—Honey Show in connection with that of Lichfield Floral and Horticultural Society. Two classes for members of Staff B.K.A. Six open classes for Honey, Bees, and Wax, and two open cottagers' classes. Ten guineas and six medals offered in prizes. Schedules from F. J. Hall, City Station, Lichfield. **Entries close July 29**

August 9, 10, and 11, at Hull.—Show of Honey, Bees, Hives, and appliances in connection with the Yorkshire Agricultural Society. Nine classes, with liberal money prizes, for hives, bees, honey, and beeswax.

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire Beekeepers' Association. Open class. Schedules from Mr. A. R. Moreton, Hallow, Worcester; or Mr. G. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries close August 9.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23, at Lancaster. — Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. Open Classes for Extracted and Comb Honey, also Beeswax and Produce. Four silver and bronze medals and other specials. Schedules from Thos. Armistead and Son, Auctioneers, Lancaster. **Entries close August 14.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 26, at Barnton.—Honey Show, in connection with the Barnton Floral and Horticultural Society. Two classes open to the county and all members of the C.B.K.A. Six local classes. The Cheshire B.K.A. will present their silver medal to the winner of first prize in Open Class for twelve jars light honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 19**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes. Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including

three 1-lb. jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

New Reader (Twyford, Berks). — Your bee-keeping friend is entirely wrong in supposing that over-feeding in spring will cause foul brood. You may therefore safely dismiss all fears on the point you name.

J. F. L. (Warrington). — Artificial Swarming. — With only one stock in frame-hive to deal with, you may—during the present warm weather—increase to two by removing one comb of brood, on which the queen is found, to a new hive, which latter must have its frames filled with comb-foundation; put the brood-comb, with queen, in centre of new hive, lifting out one frame to make room for it. Then cover all down warmly, and place it on the old stand. Close up the frames of parent stock, and put the frame taken from new hive at the side. Move the old hive on a new stand some distance away. Keep it very warm, feed the bees (unless there is plenty of food in combs), and reduce width of entrance to one inch. The bees will raise a new queen and all go on well after a week or two.

Westmerian (Milnthorpe). — Preparing Extracted Honey for Show-bench.—See that the honey is fully ripe when extracted, and carefully strain it to remove all particles of wax, etc. Keep in a warm place till day of show to prevent the "cloudiness" which precedes granulation, and see that little or no froth appears on top of honey when jarred off.

D. J. J. (Aberdare). — Swarms Issuing Unseen.—It is nearly certain that the swarm had issued on the previous day and had been clustered unseen till noticed at 7 a.m. next day.

T. S. (Carlisle).—Bee-forage.—We do not think bees get any appreciable quantity of honey from the flower of *Senecio Jacobæa*.

T. K. (Carshalton).—Mutilated Drones.—The appearance of dead drone is that of having mated with a queen bee.

A. A. (Great Totham).—Hives near Showfield.—We strongly advise removing the two stocks of bees from such close proximity to "reserved seats" for spectators witnessing the "sports" connected with a flower-show. It might cause unpleasantness, and worse, if the bees became vicious, as they might easily do during the commotion and bustle of such a scene. If hives are well ventilated and taken into a cool dark outhouse or cellar, the bees will take no harm from one day's confinement.

Suspected Combs.

K. (Somerset). — Comb is affected with foul brood. The measures you have taken are quite right.

Danum (Doncaster). — Comb is affected with foul brood. For treatment deal with it according to directions given in the "Guide Book."

A. E. H. (Chessetts Wood).—No disease in comb sent.

H. M (Birmingham)—Comb smashed flat in post, as is always the case when sent protected by an envelope only. We find nothing about it worse than honey and pollen.

W. B. v. H. (Consett).—Both samples are affected with foul brood, the smaller piece being absolutely rotten with disease. We advise total destruction of both stocks to avoid infection, with so many as thirty-eight healthy stocks in your apiary.

Bee Garden (Cumnor).—The small piece of new comb shows slight signs of incipient foul brood in two cells only. All other cells contain larva in healthy, plump normal condition, not even dead from chill by the appearance of larvæ. There may be worse signs in older combs, but sample looks as if it was a quite recent outbreak. Use the ordinary preventives if no worse signs are found in other combs.

F. A. A. (Yorks).—Comb shows a very bad case of foul brood.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

Decision of the Board of Agriculture.

The following official correspondence between the British Bee-keepers' Association and the President of the Board of Agriculture and Fisheries will serve to fully inform our readers on the present situation with regard to foul-brood legislation. Nor will it cause surprise among level-headed men to find that the prospect—both present and future—is not encouraging. But it is best to look facts in the face, and it seems clear that, until there is more unanimity of opinion among bee-keepers themselves on the vexed question at issue, it is useless to hope for legislation on the subject at present.

The correspondence which appears below comes before the Council of the B.B.K.A. at their meeting on the 19th inst. (before these lines are in print), but, having been favoured with copies of the several communications, we are enabled without delay to put readers in a position to judge of the matter as it now stands.

British Bee-keepers' Association,
12, Hanover Square,
London, W.,
July 12th, 1905.

To the President of the Board of Agriculture and Fisheries, 4, Whitehall Place, S.W.

British Bee-keepers' Association and Foul Brood Legislation.

Sir,—Since the last interview our Chairman, Mr. T. W. Cowan, had with you on this subject, the Association has made continuous effort to arrive at a knowledge of the amount of support their proposals had obtained, or would be likely to obtain, from the County Councils.

To this end copies of the proposed Bill were sent to be Bee-keepers' Associations, with the request that after it had received the approval of their members, they would bring it before their respective County Councils, and obtain their decision as to supporting such legislation.

From the annexed schedule it will be seen that of the twenty-nine Associations seventeen support the Bill, five are against it, and seven remain undecided, the members being divided in opinion.

Of the County Councils, eight have decided for the Bill, and one (Surrey) against it. Of the remaining County Councils we have no information from the County Bee-keepers' Associations.

Looking closely into the result, we find that those County Councils which have taken an active interest in promoting bee-keeping are desirous of obtaining legislation, with the exception of Surrey. That county, having some years ago found the necessity of combating the disease, is satisfied that the present methods are sufficient.

An attempt to obtain the opinions of individual bee-keepers has also been made by means of voting papers, issued in the columns of the Bee Journal and the *Bee Record*. As the result of this effort 421 bee-keepers, owning 4,477 stocks, voted in favour of the Bill; and 299, owning 7,352 stocks, against it. Although but a small fraction of the readers of these journals took the trouble to record votes, the result shows that it is the small bee-keeper who asks for the Bill, and that owners of large apiaries are against it. Letters also show that the larger the apiary owned the more strenuous is the opposition of the owner to the proposed form of legislation.

Having placed the present position of this matter before you, the Association desire to ascertain if you consider the demand for legislation sufficiently strong for the Board of Agriculture and Fisheries to support the proposed measure.—We have the honour to be, your obedient servants,

Thos. I. Weston, Vice-Chairman.
Edwin H. Young, Secretary.

British Bee-keepers' Association,
And Legislation for the Better Prevention of Bee-pest.
Schedule of Information Collected to July 12th, 1905.

Berkshire B.K. Association:—
The Bill as now framed will be inoperative and ineffective.

Bristol B.K. Association:—
In favour of the proposed measure.

Buckinghamshire B.K. Association:—
No decision notified.

Cambridgeshire B.K. Association:—
Resolution passed in opposition to the Bill.

Cheshire B.K. Association:—
In favour of the Bill. The County Council will petition for the Bill.

Cornwall B.K. Association:—
No decision notified.

Cumberland B.K. Association:—
In favour of the Draft Bill promoted by Mr. G. M. Saunders (Hon. Sec.).

Derbyshire B.K. Association:—
In favour of legislation, but do not bind themselves to support either of the Bills promoted by the B.B.K. Association, or by Mr. Saunders, of the Cumberland B.K. Association.

Devonshire B.K. Association:—
In favour of the Bill. County Council have petitioned the Board of Agriculture and Fisheries in favour of the measure.

Essex B.K. Association :—
In favour of the Bill. Committee of the County Council have recommended the Council to support the measure.

Glamorganshire B.K. Association :—
In favour of the Bill. The County Council have as yet taken no action.

Hampshire B.K. Association :—
In favour of legislation.

Huntingdonshire B.K. Association :—
Majority against legislation. A few signatures in favour received.

Lancashire B.K. Association :—
In favour of legislation.

Leicestershire B.K. Association.
In favour of the Bill. Association approaching County Council on matter.

Lincolnshire B.K. Association :—
In favour of the Bill. County Council have petitioned the Board of Agriculture and Fisheries.

Middlesex B.K. Association :—
Offers contributions to the expenses fund, but have not ascertained the opinions of members of the Society.

Norfolk B.K. Association :—
In favour of the Bill.

Northamptonshire B.K. Association :—
Hon. Secretary thinks the majority are opposed to the Bill.

Northumberland and Durham B.K. Association :—
In favour of the Bill promoted by Mr. G. M. Saunders, which they have asked the County Council to support.

Nottinghamshire B.K. Association :—
Committee were in favour, but their decision was overruled in General Meeting. An appeal to the members by circular resulted thus :—Fifty-one members, owning 350 stocks, voted in favour; and fifteen members, owning 88 stocks, against. Number of members, 172.

Oxfordshire B.K. Association :—
The matter has been before the County Council, but no decision yet arrived at.

Shropshire B.K. Association :—
Indifferent, and disinclined to render any aid.

Staffordshire B.K. Association :—
Approve the principle of the measure.

Surrey B.K. Association :—
Opposed to the measure.

Warwickshire B.K. Association :—
In favour of the Bill. Board of Agriculture and Fisheries petitioned by the County Council.

Wiltshire B.K. Association :—
In favour of the Bill.

Worcestershire B.K. Association :—
In favour of the Bill. Agricultural Sub-Committee recommend the County Council to support the measure.

Yorkshire B.K. Association :—
No decision notified.

NOTE.—The evidence collected from individual bee-keepers goes to show that the larger bee-keepers are opposed to legislative interference, and the smaller, and probably less experienced, are in favour thus :—

421 bee-keepers, owning 4,477 stocks, voted for the Bill; and

299 bee-keepers, owning 7,352 stocks, voted against it.

Dated at 12 Hanover Square,
London, W.,
July 12th, 1905.

Board of Agriculture and Fisheries,
4, Whitehall Place,
London, S.W.,
July 15th, 1905.

A. 14204/1905.

SIR,—I am directed by the Board of Agriculture and Fisheries to advert to the letter from your Association, dated the 12th inst., and its enclosures, as to the proposed Bill for the better prevention of bee-pest, and to say that the Board do not think that any legislation on the subject could be undertaken with any great hope of success unless there was practical unanimity on the part of the leading bee-keeping societies and the Council of the British Bee-keepers' Association as to the necessity and advantages of legislation, and as to the form which legislation should take. As your Association are aware, the difficulties attending the passage through Parliament of Bills such as that submitted are very considerable, whether promoted by the Government themselves or on the initiative of private Members; and the Board think that for the present, and until public opinion amongst bee-keepers has more definitely matured, no steps in that direction could with advantage be taken.—I am, Sir, your obedient servant,

WM. SOMERVILLE,
Assistant Secretary.

Edwin H. Young, Esq.,
Secretary,
British Bee-keepers' Association,
12, Hanover Square, W.

LINCOLNSHIRE B.K.A.

ANNUAL SHOW AT GRANTHAM.

The annual show of the Lincolnshire B.K.A. was held on the 13th and 14th insts. in connection with the Agricultural Society's Show at Grantham. The honey and hives made a good display, although the number of entries was rather less than in recent years. The awards, made by Mr.

T. J. Weston and Mr. H. J. Banks, of Wragby, Lincoln, were as follows:—

Trophy of Honey in any Form, Staged on 4 ft. Square.—1st (and Silver Medal), W. Hatliff, Grasby; 2nd (and Bronze Medal), T. Sells, Uffington; 3rd, D Seamer, Grimsby.

Twelve 1 lb. Sections (Open Class).—1st, A. W. Weatherhogg, Willoughton; 2nd, Miss A Morley, Wellingore; 3rd, J. W. Seamer, Grimsby; 4th, W. Hatliff; r., D. Marshall, Cropwell Butler.

Twelve 1 lb. Jars Extracted Honey (Open Class).—1st, T. S. Holdsworth, Kirton-in-Lindsey; 2nd, A. W. Weatherhogg; 3rd, W. Patchett, Cabourne; 4th, Miss A. Morley; r., W. Hatliff.

Twelve 1 lb. Sections, Open to County of Lincoln, Members of Lincs B.K.A., and Lincs Agricultural Society.—1st, A. W. Weatherhogg; 2nd, D. Seamer; 3rd, W. Hatliff; 4th, T. Sells; r., Miss A. Morley.

Twelve 1 lb. Jars Extracted Honey (Members as above).—1st, G. Markham; 2nd, T. S. Holdsworth; 3rd, A. W. Weatherhogg; 4th, Miss A. Morley; r., W. Drewery, Utterby.

Twelve 1 lb. Jars Extracted Honey (other than Light), Open to County of Lincoln, and Members as above.—1st, T. Sells; 2nd, E. Cherrington, Crowland; 3rd, J. Household, Huttoft; r., F. W. Frusher, Crowland.

Twelve 1 lb. Jars Extracted Honey (Novices only), in the County of Lincoln, and Members as above.—1st, W. Drewery; 2nd, H. W. Kirkby, Saltersford; 3rd, H. Household, South Reston; v.h.c. and r., J. W. Seamer.

Twelve 1 lb. Jars Granulated Honey.—1st, T. S. Holdsworth. (No other award made in this class; a very poor one.)

Bees-wax (not less than 3 lb.), Open to County of Lincoln, and Members as above.—1st, F. Harris, Sibsey; 2nd, F. W. Frusher; 3rd, T. S. Holdsworth; v.h.c. and r., Miss A. Morley; h.c., H. Household.

Observatory Hive, Stocked with Bees and Queen.—1st, T. W. Swabey, Bracebridge Heath; 2nd, D. Seamer; 3rd, R. Godson, Tothill, Lincs.

Collection of Hives and Appliances.—1st, W. P. Meadows, Syston.

Complete Hive for General Use (price not to exceed 25s.).—1st, W. P. Meadows; 2nd, W. P. Meadows; 3rd, W. R. Garner, Dyke, Bourne.

Complete Hive for General Use (price not to exceed 12s. 6d.).—1st, W. Garner; 2nd, W. P. Meadows; 3rd, W. P. Meadows.

Lectures and demonstrations in the Beetent of the Association were given on both days by Mr W. Herrod, and were well attended. (*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

THE PASSING HONEY SEASON.

[5949.] All appearances and prognostications point to a very successful season in the North. Forward colonies started breeding early, and seem to have carried it on in spite of an inclement April and a fairly bad start in May. After this, weather conditions became very favourable, and brood nests rapidly extended. Colonies took early to supers, and have kept steadily aloft ever since. With weather suitable, and a wealth of white clover everywhere, bees have had every chance of showing what they can do—and the best colonies have done it. Unfortunately, however, many were slow in waking up, and these are still lagging behind. Possibly they may be ready for the best work by and by on the heather. My first order for honey was filled on the 15th—an earlier date than in any previous year, and I hope to forward another lot to the centre of England before July closes, counting twelve dozen sections for the two consignments.

Everywhere I hear the very best accounts of what bees have done, and I could fill a page with the bare enumeration of specially interesting items. Take Mr. Ellis's contribution as an example (5938). I hope to hear something further from him in continuation of his experiences and results. I made his acquaintance, and that of his bees, last Christmas, and was favourably impressed by both. Swarming has been a source of annoyance with many, and decamping ones have been too common. I have not had a single swarm, and I pray now that I may not have any, as forage is so abundant that splendid work should be done in the supers for a month or six weeks yet. The heather is to bloom abnormally early this season. Bell heather has been yielding for more than a fortnight, and I have already seen some florets of the true Erica, which will be in full bloom before the end of the month.

Cooler Crates.—I wish to revert to this subject, about which a correspondent queried last year, and a concrete example, showing my mode of procedure, may be

best. My most forward colony this year had a rack of sections given it on June 23 (an early date up here). On the 29th a second was placed above, a third on July 4, a fourth on the 10th, and a fifth on the 13th. It will be readily seen that all of these were placed on the hives before they were urgently required, and rather in anticipation of the wants of the bees. All were placed above the previous racks, at first merely as coolers, but in every case in a day or two sections were crammed with bees. On this being observed, they were placed below, while the nearly completed ones were raised to the top for sealing. This system works very well indeed, and while it has the merit of simplicity in handling, it causes less upset to the bees and less labour to their keeper. The liberal supply keeps the bees from feeling congested, and so helps to check all preparations for swarming.

Driven Bees.—The danger of these bees carrying infection to their new home is, I think, infinitesimal. When we consider the expeditious manner in which experts now handle bees, and the very short time generally given the bees in skeps for gorging before the drumming begins; the long time the bees are fasting before reaching their destination, often a matter of three or four days; the fact that they are placed in a clean hive, on sweet combs or even on sheets of foundation; that their future stores and building materials are uncontaminated; and that they can easily be fed on medicated food if thought advisable—then I think we must recognise that they are likely to be immune from any danger of infecting their new home. They certainly pass through a much more severe test and a more trying ordeal than bees shaken from their combs in the usual way and kept apart until they have consumed all tainted honey, before being consigned to a new hive.

My chief complaint against driven bees is that under modern methods they are boxed up with almost empty honey-sacs, forwarded lengthy journeys almost foodless from the very beginning, and so reduced in stamina that too many of them succumb before the opening of the new season. This is a very real evil, which is becoming more pronounced. And it does not end there, because this famine journey has a deleterious influence on the queen's laying powers, frequently reducing her vitality for the remainder of her natural life. Caterers for this class of bees should give them a fair chance to fill their honey-sacs before driving, and if they are not despatched the same evening a limited supply of feeding should be given before forwarding. Some comb-building in the new home helps greatly in imparting energy to the colony in the shape of young bees.

Carbolic Cloths.—I am a firm believer in the use of the smoker as the implement *par excellence* for controlling bees, and I had rather a prejudice against carbolic acid in any form. In the past, in my experience, it proved either so weak as to fail as an intimidant, or so strong that it contaminated honey and honey-receptacles. This season, Mr. Gillies, of the "Irish Beekeeper," kindly sent me two specimen cloths prepared for him by a Dublin firm of wholesale chemists, which have given me full satisfaction for the past month. The tests were of all kinds, and in every case the results were wholly favourable. No evil effects such as those named in 5941, p. 266, were experienced, and the bees were effectively pacified and fully under control when the hive was not kept open for too lengthy a period. When working away from home a carbolic cloth is very convenient, and even at home it can be carried in an air-tight box in the vest pocket, so that it is readily available.

ARTIFICIAL SWARMING.

[5950.] By making artificial swarms, according to most of the text-books, it has been found that a large quantity of the brood is chilled and lost; and the great advantage of the plan as used by Mr. E. W. Alexander is that this is entirely avoided, and by introducing a fertile queen to the colony on the new stand, brood-rearing goes on in both, and we have two fine colonies to take advantage of any honey-flow there may be. "D. M. M., Banff," on page 241, points out that the great drawback in the plan of division usually practised is "that a great part of the brood will be almost inevitably lost by chill owing to the paucity of bees." To obviate this loss, "D. M. M." suggests practically the same plan as that advocated by Mr. Alexander, which I mentioned in a former communication in the B.B.J., May 25. "D. M. M." says the plan has been "largely practised in Scotland, but lately revived as if it were a new invention." I mentioned the plan as used by one of the large and best honey-producers in the United States, keeping from 700 to 1,000 colonies of bees, who has, for a number of years, after trying many other methods, found this the best. In my opinion, the top body-box at the end of eleven days should be removed to some distance *at once*, and not placed alongside the original stand, as the field bees would nearly all be sure to return to the old stand and their queen. If any supers are on, they should be left with bees on the old stand. The removed hive, having nearly all young bees, would

accept a fertile queen after being queenless twenty-four hours without any risk. Should no fertile queen be at hand, it will be a good investment to purchase one from some reliable dealer, and the division should not be made until the queen is received. Egg-laying and brood-rearing would go on, and both colonies ought to give surplus. By supplying a queen-cell, or a virgin queen, considerable time would elapse, and the season's honey-flow in all probability be over.—JOHN M. HOOKER, Philadelphia, July 7th, 1905.

CLEARING SUPERS.

[5951.] Having given the method of clearing supers recommended by "D. M. M., Banff," in a recent number of B.B.J. a severe trial, I should like to thank him, as the plan does all that he claims for it.

Without trying to belittle the Porter and other bee-escapes, I may say they have occasionally failed (with me) to do their work; and it is not pleasant to go in the early morning, say, 5 a.m., and find super nearly full of bees, the escape being blocked by a dead bee or bit of wax.

Leaky Roofs.—Many materials have been advocated in back numbers of B.B.J. as coverings for hive-roofs, but I do not remember having seen galvanised iron (not corrugated), recommended for this purpose. A sheet 6 ft. by 2 ft. can be bought for 3s., medium thickness, and this is enough to cover three hives. It is easily put on, and, if bent over all round to form a drip, and only nailed on two sides, with roof made of well-seasoned yellow deal boards (Pinus sylvestris), there is enough difference in the contraction and expansion of the two materials in very hot weather to cause the metal to rise a quarter of an inch or so, forming an air-space, and assisting to prevent excessive swarming. A hive so covered will last a lifetime.—D. H., Deddington, Oxon.

THE HONEY MARKET.

[5952.] A timely word of advice re price of honey will be of service. Some inexperienced bee-keepers, in their anxiety to effect sales, are apt to offer honey at prices which are so low as to do serious injury to other bee-keepers. I am myself very successful in securing good crops of honey, but I should consider that less than 6d. per lb. would not sufficiently remunerate me for my outlay and trouble.

Bearing in mind that a retail price of 10d. per lb. will amply repay the buyer in bulk, which price he more than commands in some cases, it is simply folly to supply him with honey at an unremunerative price to the producer.—BUSINESS, Cornwall.

INSERTING FOUNDATION IN FRAMES

[5953.] The common frame with a saw-cut through the centre is ordinarily rather difficult to fit with foundation, and various devices are resorted to in order to force the sides apart for its insertion.

The best plan of all is to cut one of the sides at one end across the top-bar. This enables it to be easily separated to allow of insertion of foundation. Three small brads fasten up all securely and, treated thus, no better frame is required. These frames, being dovetailed, are easy to fix, and when the wax is boiled out in melting down old combs, the frames can be used again.

I thank a correspondent who has sent me a postcard to advise creosote for use on cloths in quieting bees. It is, however, I find, very expensive, costing 9d. to 1s. per oz. locally. Can any reader suggest something cheaper? The honey this year is of excellent quality here, and it is a splendid season.—W. J. FARMER, Redruth, July 17, 1905.

Queries and Replies.

[3820.] *Bees Refusing to Enter Sections.*—Can you give me any advice as to the best means (if any be known) of getting bees to work in the section-racks? I noticed frequent complaints on this subject in the B.B.J. last year, and I have heard more than one complaint on the same subject this year. If you or any of your readers can help to solve the difficulty, I am sure many bee-keepers would be grateful. It seems hard to stand by and see the best part of the season pass away without being able to do something to help oneself. I send name, etc., and sign — ANXIOUS BEE-KEEPER, Portsmouth, July 4.

REPLY.—If all the needful conditions are fulfilled, and there is honey to be had in the fields and orchards, there will rarely be any difficulty in getting bees to work in sections. This is a fact known to all bee-men of any experience. Why your bees persistently refuse to pass up into the sections we cannot say from a distance, or without knowing whether the "conditions" mentioned above are present or not. Full directions in this line are given on pages 57 and 58 of "Guide Book," which you would find it advantageous to read; but if your hives are full of bees, and section-racks are

made snug and warm, no trouble should arise in the present fine weather if bee-forage is plentiful in your district.

[3821.] *Bee-keeping as a Business.*—I hope you will not esteem my writing to you a great liberty. The fact is, I am anxious always to obtain information from the best possible source, and in this case you seem the best. I have started bee-keeping, and have Mr. Cowan's "Guide Book," which, of course, is invaluable; but there is one thing I should like to know which I do not find there, and it is this: Do you think that, with ordinary care and good fortune, it is possible for a man to earn enough to keep himself entirely from bees? To make matters plain, perhaps I had better tell you my position. I am young; my bent is literature principally poetry, which is remarkable for its non-remunerative qualities nowadays. Consequently, I must find some other means of gaining my bread and butter (whatever fame might accrue from the other source!). Bee-keeping seemed to me just the thing, for I thought it would not require all my time and thought, some of which, therefore, could be devoted to poetry. And so I ask: Would it be possible for me in, say, a dozen years to have some 200 or 300 hives, and get therefrom an income of, say, £100 to £200 a year or so? If you think it inadvisable to take up bee-keeping on so large a scale as this, I should be very glad if you would kindly tell me. I send name, etc., and sign—A Would-be Bee-keeper.

Reply.—Our correspondent is candid, and no doubt in earnest; and we should have been very pleased to explain how £100 to £200 a year can be made by keeping bees in this country. But we are extremely loth to encourage the idea that the way to fortune is through a bee-hive, knowing, as we do, how great is the difference between engaging in a delightful and profitable hobby—when it can be regarded as such—and depending entirely on "the bees" for a livelihood. One thing, however, we are quite certain of, viz., that "bees and poetry" will not go well together. The work of tending to 200 to 300 hives of bees would, we fear, knock all the verse-writing out of a man in a very short space of time. On the other hand, we might say that a simple enquiry in our issue of the 6th inst. (page 267) on the subject of starting a bee-farm has brought us letters offering good advice that would be useful to our correspondent. One letter, marked "private and confidential," we can, of course, only deal with by putting the respective parties in communication; but another B.B.J. reader writes:—

"The questions asked by your correspondent, 'G. W. W., London, S.W.,' *re* starting a bee-farm is of much interest to me, having some nine years ago been very much in the same position in connection with my desire to take up bee-keeping as a profitable and interesting hobby. During that period I have established a large apiary. I am always delighted to give any one deeply interested in bees and their successful management advice and the benefit of my experience, which, considering the study I have made of them, is a very wide one. If your correspondent cares to place himself in communication with me I may clear up many of his at present apparently 'at sea' intentions."

If any of our readers owning large apiaries care to give our correspondent the benefit of their experience with regard to profitable bee-keeping, we shall be very pleased to publish them.

[3822.] *Brood in Sections.* — About a month ago I put a rack of sections on a very strong stock. They then had plenty of stores and brood on seven of the ten frames in the hive; but on looking at the sections a few days ago I find the queen is filling them with drone-brood. I examined the frames in body-box, and there is plenty of brood in them, but no stores, so I am puzzled to know why the queen should leave the brood-chamber to go up into the sections and fill them with drone-brood. I am at a loss to know what I ought to do.—W. Burnham, Berks.

Reply.—You had better take off the section-rack at once, first driving down as many bees as you can with a few whiffs of smoke; then, after removing the rack, smoke the bees down into body-box, set on a queen-excluder to the latter, and lay on a single quilt. Next, remove sections one by one, shaking the bees from each on to flight-board of hive, and letting them run in. Carry the sections indoors and cut out all combs which contain brood only, and set them aside as worthless. Many will no doubt be partly filled with honey; replace them—after removing the brood—and fill up the rack with fresh sections and place on the hive above the queen-excluder for completing and filling. Our own practice is to always use queen-excluders between brood and surplus-chambers; but some bee-keepers take the risk of queens going up and spoiling the sections, as in your case. We have not used the press cutting kindly sent because of having published a verbatim report of the bee-case referred to in our monthly, the B.K. Record, for July.

[3823.] *Excessive Swarming.*—My Carniolan bees have given me great trouble by excessive swarming. They were very strong in May and storing honey well in supers. They had plenty of room and

have still. In June they started swarming. I lost several swarms through being away on business, and the last three runaway lots came out and made straight off without settling anywhere. I cut out all queen-cells after this, but they raised another queen, and to-day another small swarm came out and went off within two minutes. Why is this, and what should I have done? Your help will as usual be a favour. I send name, etc., and sign —"P.," Hexham, July 8.

REPLY.—There are times, fortunately not frequent, when bees will swarm in spite of any steps taken to prevent them, and this trait is more strongly developed in the Carniolan than in any other bee we know of. There is no "rule of thumb" by which this trouble may be overcome or minimised, nothing but practical experience can suggest what particular steps are best to take, and this can only be judged and put in practice by the circumstances as they arise.

[3824.] *Dividing Stocks after Swarming.* —Will you please tell me: 1. If the enclosed queen-cell is affected with foul brood? About six weeks ago a swarm issued from the hive in question, which I lost. Seven days after I divided the hive, leaving one queen-cell in each part, fearing the bees would swarm again, and I should lose that also. One queen has hatched all right, and is laying; the other is the one enclosed. I gave a comb of brood, with a partly formed queen-cell in it, to the queenless hive. 2. Have I done right? When looking through my bees today I got badly stung. I had examined one hive safely, and got half-through the second, when suddenly a number of bees left the frame I was holding, with the evident intention of assaulting me, which purpose they carried out in a very effectual manner. I scraped out the stings and washed my hands, and went on examining the hive, when the bees repeated their part of the performance also; after that I put on gloves. I therefore ask— 3. Why should one stock of bees resent my interference when the others were quite peaceful?. I send name and sign—E. C. S., Yorks.

REPLY.—1. The queen-cell sent contained only "royal jelly" that had turned brown in colour when dried up. 2. You did right, except in not making sure that both queen-cells were in condition for raising a queen. 3. There is no accounting for these, luckily rare, outbreaks of viciousness on the part of some stocks.

[3825.]. *Transferring Bees to Frame-hive.* —Will you kindly advise me on the following in next issue of B.B.J.? In April last I placed a skep of bees above top-bars of a ten-frame hive, as recommended in the "Guide Book." Then on June 12 I drove the bees out of skep, placed a queen-excluder on top-bars, ran the bees in at entrance, and replaced the skep. But on June 22 the bees started fighting and turning young grubs out and also a few drones. Do you think a small "Cast" or third swarm has joined them? I ask this, because the bees seem to work all right, and there is none of the excitement usually seen in cases of robbing. On examining lower hive I find brood on five frames. Since the fighting began I have floured the bees to try to quieten them; but all to no purpose. I send name, etc., and sign—BEEKEEPER, Olney, Bucks.

REPLY.—It is quite probable that the fighting has been brought about in the way you suggest—i.e., by a small swarm having entered the hive. If, however, the bees are working well, the fine weather and plentiful income of honey resulting therefrom will soon bring about peace in the hive.

[3826.] *Observatory Hives for Exhibiting in South Africa.* — Kindly inform us through your B.B.J. which is the most up-to-date observatory hive for exhibiting bees at work on their combs at agricultural and other shows? Also who the makers of such hives are?—CAIRNCROSS AND ZILLEN, Pretoria, South Africa, June 19.

REPLY.—The best hive for your purpose we know of is made by Messrs. Jas. Lee and Son, Martineau Road, Highbury, London.

Echoes from the Hives.

Borey Tracey, Devon, July 16.—I fancy we will have a very good honey-harvest this year. Though the season was rather late in starting, the fruit trees—apple, pear, and plum—were a mass of bloom; added to that, the hawthorn, hollies, and clover have been very plentiful. The white clover is now passing; but the fields are showing a fine aftermath, and the heather promises to be very fine. Both bell and cross-leaved heather are out now, and the ling is showing well. My first take of honey was about the middle of May; but I do not consider it of the very best quality, although the flavour is good. That now coming off is much better in colour. I have a few of this year's swarms, with crates of sections, ready for removal, while the old stocks are also filling supers. I seldom get a smaller

swarm than 7 lb. (first swarm). These hived on ten sheets of foundation, will soon make good stocks. I had one unusual swarming incident this year. A large first swarm came off, and was hived. Having sold it previously, I let it remain near the spot where it clustered until evening. When I went to take it away I found a queen on the ground under the hive surrounded by a few bees (not balled). Naturally I felt anxious; but, as swarm was sold, and I had sent a message to say I was bringing it by a certain train, I had to take it. I watched, but could not see any queen when hiving bees in the frame-hive; but I explained this to purchaser, and promised to see them in a week or ten days. I could not go until about a fortnight afterwards, and when I turned back the quilt they had drawn out all the combs, and frames were quite full of brood. I have seen more than one queen with an after swarm, but never with a first swarm. The only explanation I can think of is that swarming had been delayed, and the dying queen had hatched before the swarm came off, or, as an an alternative, that a young queen joined the swarm when on the wing. Has any reader had a similar experience?—A. G.

Eskdale, Cumberland, June 11.—Bees have done well since mid-June. White clover is in great abundance this year, while foul brood seems to be decreasing. Last two weeks in June honey coming in fast. I have taken off some beautiful sections, also extracted honey of lovely colour and aroma. This is a golden year in a double sense.—L. B.

HONEY IMPORTS.

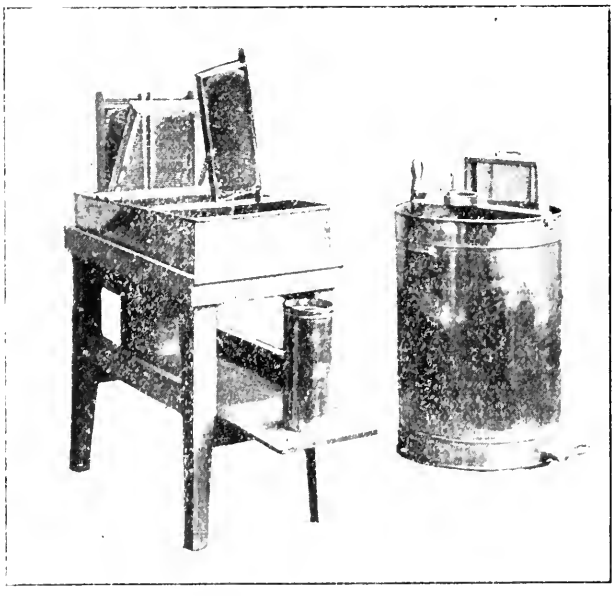
The value of honey imported into the United Kingdom during the month of June, 1905, was £3,630. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

NOVELTIES FOR 1905.

LEES' "MONKS' ACRE" UNCAPPING TRAY AND LEES' "MONKS' ACRE" EXTRACTOR.

The illustration below shows the position of the various contrivances introduced in this very complete arrangement for uncapping and extracting honey from shallow, standard, or the larger frames which some few bee-keepers have in use.

The movable cage (in two halves) shown at one end of the tray has been lifted from the extractor, and thrown open from the top (one-half resting against the end of the tray). Two shallow-frames are uncapped and placed in this case. The other half is then forced into position, closed against the two frames, and the whole is then lifted bodily out and placed in the extractor. The other cage is seen partly drawn out from the extractor, thus showing that four shallow frames can be extracted at the same time.



"MONKS' ACRE" UNCAPPING TRAY AND EXTRACTOR.

The single frame standing alone is in position ready for the uncapping knife, finding a resting-place on another cross-bar, the cappings dropping on to a strainer of tinned woven wire raised ½ in. from the bottom of tray. This bottom has a fall to a two-inch opening, through which the honey is conducted into a can placed on a shelf below, while the other end of the shelf projects to carry an oil-stove with a can of water above for heating the knives.

When two people are operating the uncapped frames can be placed in the tray ready for extracting (shown next the cage in the illustration). Between these frames and the cage is a wire-woven partition preventing the cappings as they accumulate mixing with the honey below.

By adding a movable top 3 ft. by 2 ft. to the stand it forms a useful table for general purposes; but the tray may be used on any ordinary table without the stand.

The inventor has now in use both the extractor (which works extremely smoothly and rapidly) and the tray, and finds that

both arrangements prove a great boon and saving of time. Both appliances are invented and manufactured by Jas. Lee and Son.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 26, at Upwell, Wisbech.—Honey Show in connection with the Upwell Horticultural Society, include Open Classes for 1 lb. Section and 1 lb. Jar Honey. Entry free. Entries received up to July 25. Support earnestly invited. J. H. Inman, Upwell, Wisbech.

July 26 and 27, at Cardiff.—Glamorgan Beekeepers' Association's Show, in connection with the Cardiff and County Horticultural Society. Honey, Wax, Appliances. Fourteen classes (five open). Prizes for Honey, £1, 10s., 5s., in open classes. Entry fee for one or more of the open classes, to non-members, 2s. 6d. Schedules from Wm. Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 21.**

July 27, at Cambridge.—Honey Show of the Cambs. and Isle of Eley B.K.A., in conjunction with that of the Agricultural Society, held by permission in the grounds of G. E. Foster, Esq. Eleven classes, including one for trophy of honey (five prizes), and two open gift classes (with free entry) for single 1-lb. section and single 1-lb. jar extracted honey. Schedules from G. E. Rogers, Hon. Sec., "Beeholm," Newnham, Cambs. **Entries close July 22.**

August 2, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. Open Classes for single 1-lb. section and 1-lb. jar of extracted honey. Schedules from D. Burt, The Grange, Nether Wallop, Hants. **Entries close July 26.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, Bristol. **Entries close July 26.**

August 3, at Kensington Meadows, Bath.—Show of Bees, Honey, Hives, and appliances in connection with the St. Saviour's Horticultural Society. Six open classes for honey, etc. (including honey trophy); seven local classes. Schedules from C. J. Calvert, Hon. Sec., 10, Eastbourne Street, Bath. Entries close July 24.

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open classes for Sections, Shallow Frames, Extracted Honey, light and dark and granulated Beeswax, Instructive Exhibits in Bee Culture, etc., and Special County Class for Trophy. **Entries closed.**

August 7, Bank Holiday, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Open classes for Extracted and Comb Honey. Schedules from Hon. Sec., C. J. Cooke, Edgefield, Melton Constable. **Entries close July 28.**

August 7, Bank Holiday, at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. Nine classes, with good prizes, including one for "Display of Honey." Prizes 30s., 20s., 15s., 10s., and 5s. Also open gift classes, with free entry, for single section and single 1-lb. jar extracted honey. Five prizes in each class. Schedules from G. E. Rogers, Hon. Sec., Beeholm," Newnham, Cambridge. **Entries close August 1.**

August 7, Bank Holiday, at Lichfield.—Honey Show in connection with that of Lichfield Floral and Horticultural Society. Two classes for members of Staff B.K.A. Six open classes for Honey, Bees, and Wax, and two open cottagers' classes. Ten guineas and six medals offered in prizes. Schedules from F. J. Hall, City Station, Lichfield. **Entries close July 29.**

August 9, 10, and 11, at Hull.—Show of Honey, Bees, Hives, and appliances in connection with the Yorkshire Agricultural Society. Nine classes, with liberal money prizes, for hives, bees, honey, and beeswax.

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire Beekeepers' Association. Open class. Schedules from Mr. A. E. Moreton, Hallow, Worcester; or Mr. G. Richings, 7, Shrubbery Terrace, Worcester.

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries close August 9.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 19, at Borgue, Kirkcudbright, N.B.—Annual Show of Flowers, Honey, etc. Open Classes for Honey. Apply to Mr. Munro, The Academy, Borgue, Kirkcudbright, N.B. **Entries close August 16.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23, at Lancaster.—Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. Open Classes for Extracted and Comb Honey, also Beeswax and Produce. Four silver and bronze medals and other specials. Schedules from Thos. Armitstead and Son, Auctioneers, Lancaster. **Entries close August 14.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fete in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 26, at Barnton.—Honey Show, in connection with the Barnton Floral and Horticultural Society. Two classes open to the county and all members of the C.B.K.A. Six local classes. The Cheshire B.K.A. will present their silver medal to the winner of first prize in Open Class for twelve jars light honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 19.**

August 29, at Cartmel, Lancashire.—Honey Show, in connection with the Thirty-third Annual Show of the Cartmel Agricultural Society. Three Open Classes for Comb and Extracted Honey (prizes 15s., 10s., 5s., and 2s. 6d.) and Beeswax (prizes 10s. and 5s.), along with silver and bronze medals of the Lancashire B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 17.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties

of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes. Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

Notices to Correspondents & Inquirers.

ANXIOUS ENQUIRER (Flixton).—Bees and Ventilation.—1. There is nothing unusual in bees "fanning" at hive-entrances day and night, when weather is hot as at present. 2. If bees are working in the super temporarily placed below brood-chamber, it should be removed at once and placed above the super—in which "bees are storing honey freely"—now above brood-nest.

C. S. (Harrogate).—Bee-forage.—We are unable to identify the plant by sample bloom, owing to its condition when received.

J. W. M. (Edinburgh). Dividing for Increase.—1. Perforated wooden division-boards are more safe than excluder zinc for separating virgin queens. 2. We do not like your plan of increasing stocks by dividing as proposed. The simple method of making two stocks from one, as directed on page 94 of "Guide Book" is far preferable. 3. Queries should not be written on post-cards; they are apt to get mislaid, and cause delay in reply, as yours did.

AMATEUR (Dollar, N.B.).—Stock Queenless after Swarming.—If neither eggs nor brood were found in combs, and no queen either, nearly six weeks after first swarm issued, it is about certain that the stock is queenless, and needs re-queening without delay.

EAST ANGLIAN (Bury St. Edmunds).—Immature Bees Cast Out.—No cause for alarm in a few chilled immature bees being cast out.

C. R. W. (Greenwich). — Distinguishing Swarmed Hives.—There is no easier way of finding out the hives from which a swarm has issued than by examining the frames of those stocks which seem quiet when others are busy.

Honey Samples.

CYMRO (Glamorgan).—We congratulate you on your honey this season, if the samples sent are fair specimens of the crop. They are all so good that there is scarcely anything to choose between them, flavour, aroma colour, and consistency all being of the best quality. You have evidently been favoured with a good crop of white clover in your district.

R. B. D. (Great Missenden).—Sample of honey is of fair quality. Flavour is not bad, though colour is rather dark; but decidedly its worst feature is the aroma, which, as you say, is decidedly "rank."

Suspected Combs.

ANXIOUS (Tunbridge Wells).—Most of the cells in comb sent contain hard pollen only, but in a few there are unmistakable signs of foul brood.

J. M. (Neilston).—Slight signs of disease in a few cells; most of the comb was filled with hard pollen and honey.

M. S. (Baumockburn).—Comb is so old and dried up that it was impossible to judge, without microscopic examination, whether free from disease or not. Old combs of this kind are of no value, and should not be used for bees. To judge by appearances, it is probable that foul brood has been present in hive from which it was taken.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

SECTIONS and RUN HONEY. Sample and prices.—Apply THE RAEBURN APIARY, Sawbridgeworth. I 91

FERTILE QUEENS (1905), in introducing cage, by return of post, 4s. THE APIARY, 8, Grange Street, St. Albans. I 88

BEES FOR SALE. One Five-frame Nuclei, 15s.; one Seven-frame Nuclei, £1; 1905 laying queens packed free.—MATTHEW SUTTON, Churchtown, Southport. I 89

HEALTHY DRIVEN BEES, commencing at once, 3s. 6d. per lot, cash. Orders rotation. Boxes returnable.—T. PULLEN, Ramsbury, Hungerford. I 87

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Wednesday, 19th inst., at 105, Jermyn Street, S.W., Mr. T. I. Weston occupying the chair.

There were also present Dr. Elliot, Messrs. R. T. Andrews, L. Belsham, W. Sole, W. Woodley, and the Secretary. Letters expressing regret at inability to attend were read from Colonel Walker, Messrs. W. B. Carr, R. Godson, W. H. Harris, A. G. Pugh, W. F. Reid, E. Walker, and F. B. White.

The minutes of the previous meeting were read and confirmed.

Two new members were elected, viz., Mr. Lawrence L. Goffin, Goodwyns, Wakes Colne, Essex; Mr. Jas. Grimwood, Mayfield, Earlswood, Surrey.

The Finance Committee's report as presented by Dr. Elliot gave details of receipts and expenditure to date, and, with a list of cheques recommended by the Committee, was duly approved.

A number of applications for the services of examiners of candidates for third-class expert certificates were received and dealt with by the Council. The fixtures include examinations at Swanley (July 24), also in the third or fourth week in August; Northampton; Studley (Lady Warwick College); Tisbury, Wilts (July 29); Melton Constable (August 7); Chester (August 30); Derby (August 30 and 31); also in Devonshire, Essex, and Wiltshire (Corsham), upon dates yet to be arranged.

Reports of examiners of candidates at Park Royal and in Cumberland were received, and in accordance with recommendations it was resolved to grant certificates to the following, viz., Jas. Arnott, M.D., L. Bowman, Guy Tritton Dickson, Rev. D. R. Jones, John Read, W. Titterington, A. B. Trythall, John Vicars, and Joseph Williamson.

On the motion of the Chairman, a vote of thanks was unanimously passed to Mr. J. Colam in recognition of his unvarying courtesy and kindness to the Association during his long period of office as Secretary to the Royal Society for the Prevention of Cruelty to Animals.

A meeting of the Bee Pest Legislation Committee followed, at which Mr. Weston and the Secretary reported upon their interview with Sir Thos. Elliot, Secretary to the Board of Agriculture and Fisheries, to the effect that in view of the lack of unanimity existing on the part of the Bee-keepers' Associations, the County Councils, and those bee-keepers who are most prominent and active in the pursuit of and promotion of the industry, first as to the necessity for legislation, secondly as to the methods to be adopted, and, thirdly, in view of the opposition to be encountered, there was little hope of the proposed measure being passed, if introduced to Parliament either by the Government or by a private Member. The correspondence on the subject appearing in the BRITISH BEE JOURNAL of the 20th inst. was read to the meeting.

The next meeting of the Council will be held on Wednesday, September 20.

NORTHANTS B.K.A.

ANNUAL SHOW.

The annual show was held on July 20 in connection with that of the Kingsthorpe Horticultural Society, in Kingsthorpe Park. The show of honey was not so large as in some previous years, owing to the earlier date of the show and the peculiar season in this neighbourhood. The entries numbered 110, and were sent by forty-six exhibitors. Mr. W. Herrod judged the honey, etc., and Mr. George Hefford the honey cakes, etc., and made the following awards:—

Twelve 1 lb. Sections.—1st (and silver medal), James Adams, West Haddon; 2nd, George Page, Holcot; 3rd, C. Saunders, St. David's, Kingsthorpe; 4th, C. Cox, Brampton.

Twelve 1 lb. Jars (Light) Extracted Honey.—1st, Chas. E. Billson, Cranford, Kettering; 2nd, James Adams; 3rd, C. Wells, Oxendon; 4th, G. Page; 5th, C. Cox.

Six 1 lb. Jars (Dark) Extracted Honey.—1st, W. Manning, Northampton; 2nd, C. Wells; 3rd, James Adams.

Six 1 lb. Jars Granulated Honey. — 1st, C. Cox; 2nd, W. A. Tinsley, Barrack Road, Northampton; 3rd, James Adams.

Three Shallow frames Comb Honey.—1st, James Adams; 2nd, C. Cox; 3rd, J. Abrahams, Birch Farm, Kingsthorpe.

Beeswax (not under 1 lb.).—1st, G. Page; 2nd, J. Bubb, Bugbrooke; 3rd, C. J. Burnett, Hester Street, Northampton; 4th, C. Wells.

NON-PREVIOUS WINNERS CLASSES.

Six 1 lb. Sections.—1st, C. J. Burnett; 2nd, W. Page, Holcot; 3rd, W. Butlin, Hartwell.

Six 1 lb. Jars Extracted Honey. — 1st, C. E. Billson; 2nd, W. Page; 3rd, J. Abrahams.

Super of Comb Honey.—1st, J. R. Abrahams.

SPECIAL PRIZES IN OPEN CLASSES WITH FREE ENTRY.

Single 1 lb. Jar Extracted Honey.—1st, T. S. Holdsworth, Kirton-in-Lindsey, Lines.; 2nd, C. Lodge, High Easter, Chelmsford; 3rd, T. G. Hillier, Hurst-

bourne Tarrant, Andover; 4th, Miss D. Edwards, Empingham, Stamford; 5th, James Adams.

Single 1 lb. Jar Extracted Honey (Workhouse Class).—1st, C. Lodge; 2nd, T. S. Holdsworth; 3rd, W. J. Cook; 4th, James Adams.

Honey Cake.—1st, Mrs. Skevington, Thorp Road, Norwich; 2nd, Mrs. Cox, Brampton; 3rd, Miss Knight, Wellingborough Road, Northampton; 4th, Mrs. Burnett; 5th, Mrs. Hefford.

HIVES.

Home-made Hive (Open to Amateurs Only).—1st, C. J. Burnett.

NOTTS BEE-KEEPERS' ASSOCIATION.

ANNUAL SHOW.

The annual show was held at Southwell in connection with that of the Southwell Horticultural Show on Thursday, July 20. The duties of judging the bee-exhibits were carried out by Mr. P. Scattergood, who also examined a candidate for third-class expert. This was the best show for several years past, and all the honey was excellent, compared with that shown of late years. The following are the awards:—

Beginner's Outfit.—1st, R. Mackender, Newark.

Trophy of Honey in any Form and of any Year.—1st, D. Marshall, Cropwell; 2nd, G. Marshall, Norwell; 3rd, W. Lee, Southwell.

Six 1 lb. Jars Light-coloured Extracted Honey.—1st, and silver medal B.B.K.A., W. Herrod, Sutton-on-Trent; 2nd, G. H. Pepper, Farnsfield; 3rd, J. R. Almond, Cotham; 4th, J. Breward, Rollestone; h.c., B. Bowyer, Swinderby.

Six 1 lb. Jars Dark-coloured Extracted Honey.—1st, R. Mackender; 2nd, J. Breward; 3rd, G. Marshall; 4th, D. Marshall.

Six 1 lb. Sections.—1st, W. Herrod; 2nd, W. Lee; 3rd, W. Ball, Eagle; 4th, W. Darrington, Bulwell.

Six 1 lb. Jars Granulated Honey. — 1st, A. H. Hill, Balderton; 2nd, G. Marshall; 3rd, G. H. Pepper.

One Shallow-frame of Honey for Extracting.—1st, G. A. Hill, Balderton; 2nd, G. Marshall; 3rd, D. Marshall; 4th, G. H. Pepper.

Six 1 lb. Jars Extracted Honey (Novices).—1st, W. H. Bowman, Wellow; 2nd, W. Sentance, Shelton; 3rd, H. M. Gabbett, Rollestone.

Honey Vinegar.—No award.

Observatory Hive with Bees and Queen.—1st, G. Marshall; 2nd, H. Mackender, Newark; 3rd, W. Darrington; 4th, R. Mackender; h.c., A. H. Hill.

Beeswax.—1st, W. Darrington; 2nd, W. Herrod; 3rd, G. Marshall.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS *of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 10, Buckingham-street, Strand London, W.C."*

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5954.] The honey season is now fast drawing to a close; in our part of the South of England, after the limes are over, we shall have only a sprinkling of white clover and the bramble blossoms, and I think ours is a fair sample of the whole district of Wessex. There are, of course, odd catch-crops of honey-producing plants, such as late vetches and mustard, but these are merely "remainders" in an otherwise used-up forage.

As our harvest draws to a close, we are able to form an approximate estimate of the year's results. In this neighbourhood our honey-crop is small but good, although the past ten days of bright, sunny weather, during which the limes have been in bloom, even strong stocks have not filled supers very quickly. This points to the fact that the honey-flow has not been good. On the other hand, I have not seen a trace of honey-dew, which is something to be thankful for. Without knowing what others are doing in the honey market, I am charging recent years' rates, and I hope others will do the same. It seems pretty certain that prices will be none too good, judging from notes received from various parts of the kingdom, which clearly point to a medium quantity in most instances, and very few are jubilant over good "takes." I therefore urge all to stand up for a fair price—a price that will remunerate one for work done and cash invested, and yet leave a fair margin for the retailer who pays cash and takes all risks.

In past years, when fixing foundation in saw-cut of top-bars, I used a board with two wire studs driven in close together at right angles to the length of board. The frame is pressed on to the studs and then turned half-way round. This opens the cut wide enough to allow the insertion of foundation, first cutting off a little corner at the top ends of sheet. A small nail

or a short screw put in the centre of frame makes a secure job of the fixing. Of late years I have used the double-groove top-bar, one for the foundation, the other for the wedge which fixed it securely.

I beg to warn bee-keepers against the use of creosote. No doubt it will be effective with the bees—but what of the honey? Get but the smell of creosote within the super, and it will be as much trouble to remove it as to get the smell of musk from a drawer. If Mr. Farmer wants anything more pungent than Calvert's No. 5, let him try a few drops of ammonia in addition to the carbolic acid, or a small lump in the tin in which he keeps his cloth. I always use "Calvert's No. 5," about a dozen drops of the acid dropped from the bottle on the dry cloth, which is then rolled up tight for a few minutes; but I always have the smoker at hand ready, if required; and to keep fuel in latter alight, I soak it in a weak solution of saltpetre.

As to our friend the "Poet" (whose query appears on page 286 of last week), I cannot advise him to embark in bee-keeping along with poetry. If he hopes to make a living with bees, it will be "bee-keeping and hard work." On the other hand, if he is prepared to work hard, he may, after a brief apprenticeship with a practical bee-keeper, do fairly well with his bees, if he gets a good pitch in the right district. But he will have to be a smart hand to make £200 a year.—W. Woodley, Beedon, Newbury.

SHOULD WE SUPERSEDE OUR QUEENS?

[5955.] When should we supersede our queens? In *Gleanings* of July 1, Mr. E. W. Alexander gives an account of the extensive experiments he has made with the view of satisfying himself and deciding the question as to whether his usual practice of superseding his queens when two years old was the best. He says "To supersede our queens when two years old, or to leave it for the bees to attend to, is a question of far more importance than many realise, and one upon which I very decidedly differ with some of our best bee-keepers. Last fall we had 107 queens in our apiary that were two years and a half old. For many years we have superseded all our queens at two years of age; but, as part of these queens were some we had bought, and were of an extra good strain, their hives being well filled with honey, and as some writers on the subject had claimed that the bees knew better than we when to supersede their queens, I thought I would test this matter thoroughly on a large scale, even if it cost me the 107 colonies to do so." Out of his 710 colonies he had 107 that had queens two years and a half old. All went into the cellar the middle of November, and when taken out the middle of April, he "found only eleven that had superseded their queens; and it had been done so late in the fall that six were drone-layers, and the other five were about as weak in bees as those with the old queen; of the remaining ninety-six, three were fairly good, twenty-six were very weak in bees, and the other sixty-seven were dead."

"In looking over our bees about September 1 we noticed that these old queens had all stopped laying, and had but little brood compared with the young queens. This fact had undoubtedly much to do with the weak condition of the few that survived the winter." "Of the other 603 colonies in the same cellar, that had queens six months old, and a year and a half old, only seven were lost. Now, my friends, can any of you say that it does not pay to keep track of the age of your queens, and attend to superseding them yourself? I am sure it has always paid me well, heretofore, to do so, and I do hope this costly experiment that I have just made will save many of you from a like experience."

I must say that for many years I was an advocate for letting the bees attend to this matter themselves. I became convinced that the majority of queens are inferior after they are two years old, if given the opportunity of doing all the egg laying they are capable of, and these extensive trials of Mr. Alexander have satisfied me more fully upon this point. In this article Mr. Alexander gives a simple way of "keeping track of the age and quality of the queens," as in a large apiary it is impossible to do without some ready way of registering the condition of a colony after examination. "Some years ago I cut out a lot of pieces of tin—some round, some half-round, and some square, about 1 in. in diameter; and whenever I find a young queen commencing to lay, I put one of these tags on the front of the hive on the left-hand corner, about two inches from the bottom. It is put on with a carpet tack through the centre, and is easily taken off with a knife; and it follows that queen to every hive she is put into. If she proves to be a choice queen, the tag is put a few inches higher up on the corner of the hive; and if very choice, still higher. If she is inferior in any way it is put over towards the middle of the hive; if very poor, it is put clear over to the other side. I use only one shape of tag each summer's rearing. The next summer I use another

shape. Then, when I walk through the apiary, I can tell at a glance the age and quality of every queen in the yard; and when I have surplus queens on hand I go to the hives that contain my poorest queens and supersede them at once without having to open any hive unnecessarily. I see by the fronts of the hives just how many queens I have of a certain age; also their quality." "If the queen to be superseded (as is generally the case) is old, and beginning to fail in keeping her hive well filled with brood, then you stand a big chance of having a weak colony in the following spring unless you give them a young queen before August 1." This would give sufficient time for rearing a good lot of brood before the close of the season, and the colony would go into winter quarters with a number of young bees, so there need be no fear of spring dwindling if provided with sufficient supplies.—JOHN M. HOOKER, Philadelphia, U.S.A., July 12, 1905.

A SWARMING EXPERIENCE.

[5956.] I send following particulars of an experience with one of my hives, during these last fourteen or fifteen days, and at the same time ask if it is not a unique one? On June 24 I had a good swarm, which was put in a new hive on eight frames fitted with full sheets of foundation, together with two frames of brood (no queen-cell) from parent hive. On the top of brood-chamber I put a box of shallow-frames, and left the bees, as I thought, with plenty to do for remainder of the season. However, on Sunday, July 9, after only being in the hive about a fortnight, they issued forth as a swarm themselves. Upon examining the hive, I found seven combs in the lower chamber full of unsealed honey, and a fine capped queen-cell on one of the combs. Worker-brood filled the other three frames. The shallow-frames were also full of honey, but not capped.

I did not remove the frames containing honey from the brood-chamber, because it was not capped, but cut out the single queen-cell, returned the swarm, and placed a rack of sections on top of shallow-frames. Could I have done anything better, not having an extractor? I send name and sign—E. J. S., Griffithstown, Mon.

[While not "unique," your experience is the very uncommon one of bees sending out what is termed a "virgin swarm." It would seem to show that bees are sometimes so excited over their prosperity that the swarming impulse remains even after they are housed in a new home with plenty of room for their requirements, they "still cry out for more."—EDS.]

QUEEN KILLED AND CAST OUT.

[5957.] Allow me to thank you for your kind and prompt communication *re* "Queen Killed and Cast Out," which I received on Friday last. I believe, however, I have now solved the mystery, for, on looking into a nucleus hive, I found that a newly hatched queen had disappeared from it. I therefore imagine she flew abroad, and tried to enter the wrong hive—a proceeding to which its occupants naturally objected, and prevented, with this result.—(Mrs.) M. S., Holywell Manor, St. Ives, Hunts.

THE HONEY MARKET.

[5958.] One of my customers informed me that he was offered honey this year at 45s. per cwt. But, while agreeing to give me a better price than that, he offered me 6s. per cwt. less than he paid me in previous years. It cannot be said that my customer has, from his point of view, treated me otherwise than fairly, though I feel unable to accept the reduced terms. To my mind we have good reason to complain seriously of any bee-keeper who offers his honey at 45s. per cwt. It is akin to the sweating system; 56s. per cwt., "carriage paid," is the lowest price at which good honey should be sold, for, what with risk of foul brood, and the labour involved, a less price is not remunerative. As already pointed out, the retail price of from 10d. to 1s. per lb. offers an ample margin of profit to the retailer at 56s. per cwt. I shall not sell mine for any less. If prices are "cut" in this needless way, bee-keeping will not be worth following. The root of the difficulty is the number of small and unbusinesslike bee-keepers who spoil the trade, and, without much benefit to themselves, injure others.—I enclose name, and sign myself—A BEE-KEEPER, Cornwall.

BORROWING BEE-APPLIANCES.

[5959.] Mr. W. Loveday told us, on page 213 of B.B.J., that one man in his neighbourhood had, by borrowing and lending bee-appliances, etc., spread foul brood in the district. I think bee-keepers should make it a rule to neither borrow nor lend. It is too risky; besides, by borrowing we not seldom cause serious inconvenience to the neighbour who obliges us, who may be in want of the very things that we have got the loan of. Borrowing is a bad habit in other matters than bee-keeping. All good bee-keepers will avoid it entirely, and so I advise all B.B.J. readers to avoid infection and inconvenience.—W. J. FARMER, Redruth.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Thorough.—Mr. J. A. Green, in *Gleanings*, has the following to say of foul brood:—"After making due allowance for the fact that foul brood may be cured in a variety of ways by the expert, and with but little risk of spreading the disease in so doing, the fact remains that for the average bee-keeper the easiest, quickest, surest, and (four times out of five) the cheapest way to get rid of it is to burn up all infected colonies—bees, combs, and hives—just as soon as it is discovered." I readily subscribe to above. I should like to disabuse the minds of Americans of the prevalent idea there, lately expressed by Mr. Scholl, Dr. C. C. Miller, and Mr. E. Root, that the disease here is of "a milder form than the dreaded disease we have in America." It can be as virulent here as there, and as destructive. Bacillus alvei is the same everywhere. Perhaps the idea of a milder form here germinated from the mistaken writings of an otherwise able bee-keeper who takes quite an isolated position on this subject. Americans, however, should know that his is a voice crying alone in the wilderness. His so-called propositions are wrong in theory, and his deductions unsound in logic, as all trusting to this broken reed will find to their cost.

"*Shook Swarming.*"—Mr. Ernest Root briefly describes it thus:—"Just a few days before a colony is about to cast a swarm, or is seen to show indications of such a desire, the old hive with the super is moved to one side a few feet, entrance pointing in the same direction, and a new hive with frames of 'starters' is put on the old stand. Three-fourths of the bees in the old hive are shaken or brushed off the combs in front of the new hive, now on the old location. Last of all, the super on the old hive is put on the new one. In two or three weeks more, when the brood is all hatched in the old hive, the combs may be given another shake, giving the swarm the rest of the bees it would have had, provided it could have been induced to remain contentedly in the old hive. The queen, virgin or laying, in the old hive should be removed before the second shake."

I have given this extract because the question of swarm prevention is the all-engrossing topic in American bee-papers just now. Alongside of it let me place the following from Mr. Hutchinson in the *Review*, regarding the Sibbald method:—"Many seem to think it a method of forestalling swarming, the same as is the case with shook swarming. It is true a comb of bees, brood, and a queen-cell are placed upon the old stand, and the old colony set to one side, but as a rule this change is made only temporarily, for about four days, until the queen-cells have been destroyed in the old colony and the swarming fever has subsided, when the divided portions of the colony are again united." The kernel of the above method is getting rid of the swarming fever. We in this country have been working more on the lines of the Alexander system, lately described in our journal, and for our climate I am inclined to express a preference for this plan. It has several commendatory features, which suit our mode of working, lacking in the other two.

Our Bee-keeping Sisters.—The editor of the *Review* has gallantly presented us with a charming counterfeit presentment of one of these, as a frontispiece to his June issue, in the person of Miss Flora Macintyre, California. Miss Flora is her father's right-hand *man*, as the following showeth:—"Last year she ran the Sepse Apiary (of 400 colonies) with some help from her younger sisters. She uncapped and extracted sixteen tons of honey, and ran a hundred nuclei for queen-rearing."

Miss Wilson, in the *American Bee Journal*, gives an excellent letter from a Mrs. Honaker on "Bee-keeping for Women: A Desirable Occupation," which I wish I could reproduce in full, but the following must suffice:—"Women with spare time on hand should try bee-keeping. There is nothing about or connected with the work repulsive to the most fastidious, nor is there anything about it beyond the strength of the ordinary woman. The returns from even a few colonies should, if bees are well managed, be sufficient to ensure financial independence. It is a desirable occupation in more respects than one. Profitable, strengthening, and uplifting to body, mind, and soul; it is conducive not only to mental and moral health, but to physical as well." I should like to see our ladies figure out more prominently than they do. We have it on the high authority of our Junior Editor that they make excellent manipulators, and I believe some of the best 'passes' he ever recorded in his examinations were given to sisters in the craft.

Past Winter Losses.—The *Canadian Bee Journal* reports these as very severe:—"East of the Ottawa 75 per cent. of the colonies were lost. That would mean 54,000 colonies dead, leaving only 17,000 that came through the winter. West of the Ottawa 50 per cent. were lost, leaving the stocks of bees not more than 60,000—giving in all only 77,000, where the census of 1901 gave a total of 190,000. This is a terrible death-rate." It certainly is, yet our cousins over there are not a whit discouraged, but still believe that the

"Lady of the Snow" is par excellence the place for bees, and for producing the best honey on earth. Bravo, Canada!

Something Startling (if true).—"It is a fact that ceresin foundation is sold in Europe," says the Editor of *Gleanings*. "The reason why paraffin and ceresin foundation can be sold across the water and not in America is due to the difference in climate." Hold hard, Mr. Root! You have been over-hasty in trusting to Mr. Hasty, who is here not a "reliable" guide. Your deduction is wrong, because your *foundation* is wrong. Like the ceresin foundation in any hive, it falls, owing to its not being genuine. Here in Great Britain our manufacturers are above suspicion, and would not adulterate, I believe, for all the trifling gain. But there would be no gain, only loss, because with the splendid foundation we can get, bee-keepers would never give a repeat order to any house selling such vile stuff. I have said adulterated foundation would break down in any hive, and I might add in any clime. The temperature of the hive interior is such during our warm summers that nothing but the genuine article will bear the strain imposed on it. The A. J. Root Co. send us first-class foundation, and Messrs. Dadant's is all that they claim for it; but we can, and do, turn out "Holme" weed equal to theirs, while all our leading manufacturers supply us with brood and super "perfect and unexcelled for purity, toughness, regularity, and transparency, and such as always gives satisfaction." Indeed, I unhesitatingly assert our foundation is "*pure* beeswax, *the purest of the pure.*"

Highly Appreciative.—Prof. J. A. Cook, in his Gleanings from the Pacific Coast, has the following to say of our Senior Editor:—"We are glad to know that Mr. Cowan has again returned to our country and State. Those of us who know Mr. Cowan cannot but appreciate his great ability and equal courtesy. It is good to know a man who is so thoroughly and invariably the gentleman. As Senior Editor of the BRITISH BEE JOURNAL he has done very much for our art. Like all great men, Mr. Cowan is an example of modesty. He never pushes himself to the front. His book, 'The Honey Bee,' is one of the very best ever written by any one. Though small, it is yet wonderfully complete, as it is an example of conciseness. It is a model of accuracy, so that no one need question any statements of facts taken from this work. Mr. Cowan has also inventive genius, as evidenced in his automatic extractor, which, so far as I know, is not excelled by any other machine on the market. It only remains to be said that Mrs. Cowan is as delightful as her husband. To know such people is to be enriched, and we may all rejoice that Mr. Cowan is with us again." Comment on the above eulogy would be superfluous.

Queries and Replies.

[3827.] *Dealing with Foul Brood.*—Foul brood has broken out amongst my hives this season, and indeed amongst all the stocks in the district where my apiary is situated. Some people are endeavouring to cure it in a half-hearted sort of way, whilst others are doing absolutely nothing at all in trying to get rid of it. I have been treating my stocks with phenolated syrup for three weeks by pouring about a quarter of a pint of syrup between the frames every evening. I am glad to say that the disease is disappearing, and the smell is now scarcely perceptible. One stock has started to build queen-cells, and in one cell at least there is a larva; therefore, as all my queens are of uncertain age, I ask: 1. Do you think it wise to raise young queens from this stock, which has had, and is scarcely now free of foul brood, though there is at the outside not more than half-a-dozen larvæ in each comb affected with the disease, and none at all in the new combs put in the hive? 2. If I tried this, my endeavour would be to raise four queens; and, if successful, I would probably take all queens in the nucleus hives to a healthy district to be fecundated, provided you do not think that by so doing I should introduce the disease into that district. If this course does not meet with your approval, I might procure a healthy stock and endeavour to mate the queens with selected drones. 3. Is there any way of telling the age of a queen from her appearance? An early reply will oblige, as time is short. I send name for reference.—H. S., Stratford-on-Avon.

REPLY.—1. There would be no risk in the direction you fear, so far as regards young queens carrying the disease with them. 2. You could not ensure queens being mated with selected drones. 3. It is generally easy to detect signs of age in a queen by the torn and ragged wings and the absence of pubescence, or hairyness, on the body; but appearances are sometimes very deceptive, and good queens often show signs similar to those mentioned, while very prolific.

[3828.] *The Metamorphoses of the Queen Bee.*—From the last paragraph of chapter iv. (page 19) of the "Guide Book" I gather that when a swarm leaves a hive the new queens, one of which is to become the head of the old hive, are then in the cells, and do not hatch until after the

swarm has left. Again, from the first portion of chapter v. (page 19), I learn that after-swarms, containing one of the newly hatched queens, usually leave the hive on the ninth day after swarming. Therefore, the new queen could not at the outside have left its cell more than eight days, and probably less. But, in the table on the "Metamorphoses of Bees" (page 11), it states that a queen leaving a cell on the 16th, leaves the hive to fly on the 5th. Counting thirty days in the month, this means that a queen-bee has left its cell nineteen days before able to leave the hive.

What puzzles me, therefore, is—How, if a queen bee is not fit to fly until eighteen to twenty days after leaving the cell, one can leave the hive with an after-swarm in from six to eight days after leaving the queen-cell? Hoping you will put me right on the matter, I send name and sign—E. J. S., Griffithstown, Mon.

REPLY.—You labour under a mistake in misreading the second, or lower, table (page 11 of "Guide Book") detailing the metamorphoses of the queen-bee. According to the upper table the queen occupies fifteen days in reaching maturity, and the last line of lower table states that on the fifth day after emerging from the cell it leaves the hive to fly. There can be no mistake on this point if you peruse the thirteenth line from top of page 9, which states that the young queen usually leaves the hive for mating purposes in "from three to five days after birth."

[3829.] *Introducing Queens.*—I would be much obliged if you would advise me under the following circumstances. On June 21 one of my stocks swarmed. I had a queen ready in a nucleus hive prepared as directed in the "Guide Book," so I removed all queen-cells and put her in a box (using Taylor's introducing stage) on the stock (I had just used this stage in same way on another hive with success). I left her on top for forty-eight hours, and then slipped the catch on stage at night. Next day I looked in hive and saw queen on floor-board, apparently all right, surrounded by bees with their heads pointed towards her. To-day I had another look at the combs, but the queen could not be found, though I examined each comb most carefully, and as a rule I easily find the queen. There are not many bees, but every frame is thick with sealed and unsealed brood. Now, with a view to saving time, what should I do? Would you advise sending for another queen? My other three hives are so full of bees, honey, and brood that I cannot unite. I am sorry to trouble you at such length, but I am quite a beginner, and all I know has been learnt from the "Guide Book" and the B.B.J. I send name for reference—D. C., Great Missenden.

REPLY.—We advise purchase of a laying queen, and introducing her at once.

[3830.] *Bees Not Working Well.*—Your editorial on page 271 of last week's issue of B.B.J. points to the present season as likely to prove a splendid one for the bees. And yet here in this village, where my two neighbours and I have some fifteen hives—mostly strong—between us, they are doing very little in the supers. I therefore ask:—1. Do you think it likely that this strain has deteriorated through in-breeding, for there has been no introduction of fresh blood amongst our bees lately? If so, 2. Would you advise me to purchase an Italian or Carniolan queen for one or two of my hives? I do not want to get vicious bees. Ours at present are very docile.—H. C. H., Achurch, Northants, July 15.

REPLY.—If bee-forage is plentiful in the district, and your stocks are healthy and strong, there must be some fault in their working qualities to cause idleness in so good a season as the present one. A change in queens might therefore be advantageous. But we advise a trial of one foreign queen and one native of good ouality, and compare results.

[3831.] *Bee-forage.*—There are a good many patches of the enclosed yellow flowers here on the heavy clay soil. Will you please tell me: 1. If they are any good as bee-plants, and their names. That numbered one is called by the residents here "Tom Thumb"; No. 2 they call "Wood Wax." 2. Can hive-bees be kept in the Province of New Brunswick, Canada, as far north as Fredericton, or is the climate too severe? I send name, etc., and sign—MEL ROSÆ, Yarmouth, July 5.

REPLY.—No. 1 is the common Bird's-foot Trefoil (*Lotus corniculatus*). The correct local term for No. 2 is "Wooden Waxen" (*Genista tinctoria*). 2. Bees are kept in the Province of New Brunswick, but whether so far north as the place named we cannot say.

[3832.] *A Beginner's Swarming Troubles.*—Being a beginner in the bee industry, I would be glad of a little advice in your valuable paper, to which I have recently become a subscriber. On June 22 my bees (one skep) swarmed, and the bees were duly housed in a modern frame-hive. I am pleased to say they are now doing well. The second swarm came out in due course, but returned to the parent skep. They did this three times, and were secured each time in skep, but returned as before. Yesterday, however, being away from home, I found that the swarm had again come out, and, this time, flown right away, and were

lost. To prevent further swarms from issuing, I have removed the plug from feed-hole of skep, and placed another skep on top (secured) as a super, and ask: 1. Is this correct? 2. A friend of mine has a swarm under the slates of his house, hanging between wall and partition. He has tried to smoke the bees out, but so far has failed to move them. Will you kindly advise?—I send name, etc., and sign—YAGO, Cornwall, July 4.

REPLY.—1. If a cast or third swarm has not issued by the time this reply appears no further swarming will take place; but in any case you must not expect bees to enter the upper skep and store honey there this year. 2. It may require removal of a few slates in order to get at the bees and secure them for taking away.

[3833.] *Teaching Bee-keeping in Schools.*—I am sending per same post a dead queen bee which was thrown out in front of my hive to-day. Please say: 1. Whether it is an old queen or a young one; and, if the latter, is it fertilised? 2. Under what circumstances it has probably met with its death. 3. Is my hive likely to be requeened? The flow of nectar from clover began here early in June, but the above-mentioned stock never seemed very busy, though strong in bees. During the last few days, however, they have been working hard, but have not shown any signs of swarming (never having "hung out"). I am quite a novice in this fascinating hobby of apiculture, but, having just introduced cottage gardening at this school, I decided to initiate the juveniles in the mysteries of honey-raising and procured a stock hive in March last. Thanks to the ready assistance given by a bee-master of wide experience in this village, together with the valuable help derived from the B. B. J. and "Guide Book," I am delighted with the new venture. It afforded me great pleasure to take two complete sections of fine clover honey off last week and to learn from bee-keeping friends that they were fit for show-purposes. I send name for reference, and sign—F. A. W., Church School, York.

REPLY.—1. Dead bee received has every appearance of an adult fertile queen, though not a large one. 2. It has apparently been roughly pulled about, as if "balled," the anterior wing on one side having gone and the posterior wing on the other, as if nibbled away by bees. 3. Yes.

[3834.] *Novel Plan of Returning Swarms.*—I had a swarm from one of my hives on June 23. As this came off late in the season with a good honey-flow at hand, I returned the swarm to the parent hive, in the following manner, fearing I might miss the queen in the usual method of throwing on to a sheet. The hive was supered; over this I put excluder-zinc, and set on the top a rack of shallow-frames into which I shook the swarm. Two days later I examined this, and caught the queen, which I have given to a queenless stock. 1. Is this method novel, and is it to be recommended? 2. I have found bees do not sting the hands, if the latter are rubbed well over with garden-soil before commencing operations. Have others tried this? I send name, and sign—CLEVEDON.

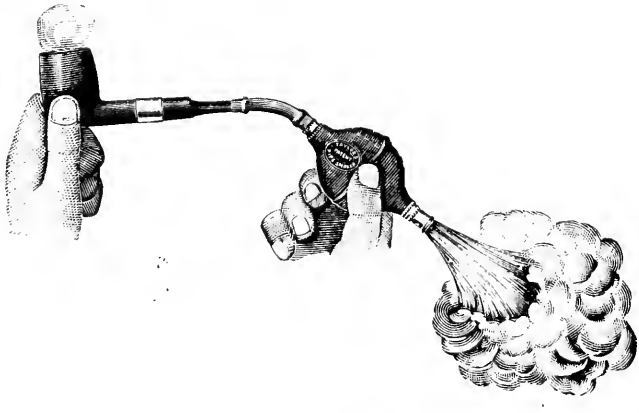
REPLY.—1. We cannot call to mind a case in which the plan detailed above has been followed. It may have answered in your case, but we should expect to hear of bees swarming again unless all queen-cells but one were removed from the parent hive before returning the swarm.

NOVELTIES FOR 1905.

TAYLOR'S PIPE-SMOKER FOR BEES.

(Patented.)

The little bee-appliance illustrated below will no doubt be found an exceedingly useful appendage to every bee-keeper's outfit—one of the novelties that have "come to stay." Mr. E. H. Taylor, Welwyn, Herts, who has introduced it to the notice of bee-keepers, sends the following particulars regarding its use:—



TAYLOR'S PIPE-SMOKER.

"This handy little contrivance is made in rubber, and is small, being compact, and easily carried in the pocket. It has been designed for the use of bee-keepers who do not care for a heavy smoker. The tube is fixed on mouthpiece of pipe, and, by squeezing the ball, the smoke is drawn

down the stem and given off in a dense cloud through a valve in end of ball. Beekeepers will find it very handy and convenient. Non-smokers can use same, as the pipe should not be lit in the mouth. If the valve clogs after using, unscrew same and clean it. Price 1s. 6d.; or with briar pipe, 2s. 6d., post 3d.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 2, at Wallop, Hants.—Honey Show in connection with the Wallop Horticultural Society. **Entries closed.**

August 2, at Henbury, near Bristol.—Annual Show of Honey and Wax of the Henbury District Beekeepers' Association, in connection with the Horticultural Society's Exhibition. **Entries closed.**

August 3, at Kensington Meadows, Bath.—Show of Bees, Honey, Hives, and appliances in connection with the St. Saviour's Horticultural Society. **Entries closed.**

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. **Entries closed.**

August 7, Bank Holiday, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Open classes for Extracted and Comb Honey. Schedules from Hon. Sec., C. J. Cooke, Edgefield, Melton Constable. **Entries close July 28.**

August 7, Bank Holiday, at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. Nine classes, with good prizes, including one for "Display of Honey." Prizes 30s., 20s., 15s., 10s., and 5s. Also open gift classes, with free entry, for single section and single 1-lb. jar extracted honey. Five prizes in each class. Schedules from G. E. Rogers, Hon. Sec., Beeholm," Newnham, Cambridge. **Entries close August 1.**

August 7, Bank Holiday, at Lichfield.—Honey Show in connection with that of Lichfield Floral and Horticultural Society. Two classes for members of Staff B.K.A. Six open classes for Honey, Fees, and Wax, and two open cottagers' classes. Ten guineas and six medals offered in prizes. Schedules from F. J. Hall, City Station, Lichfield. **Entries close July 29**

August 9, 10, and 11, at Hull.—Show of Honey, Bees, Hives, and appliances in connection with the Yorkshire Agricultural Society. Nine classes, with liberal money prizes, for hives, bees, honey, and beeswax.

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire Beekeepers' Association. Open class. Schedules from Mr. A. R. Moreton, Hallow, Worcester; or Mr. G. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries close August 9.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 19, at Borgue, Kirkcudbright, N.B.—Annual Show of Flowers, Honey, etc. Open Classes for Honey. Apply to Mr. Munro, The Academy, Borgue, Kirkcudbright, N.B. **Entries close August 16.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23, at Lancaster. — Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. Open Classes for Extracted and Comb Honey, also Beeswax and Produce. Four silver and bronze medals and other specials. Schedules from Thos. Armitstead and Son, Auctioneers, Lancaster. **Entries close August 14.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 26, at Barnton.—Honey Show, in connection with the Barnton Floral and Horticultural Society. Two classes open to the county and all members of the C.B.K.A. Six local classes. The Cheshire B.K.A. will present their silver medal to the winner of first prize in Open Class for twelve jars light honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 19.**

August 29, at Cartmel, Lancashire.—Honey Show, in connection with the Thirty-third Annual Show of the Cartmel Agricultural Society. Three Open Classes for Comb and Extracted Honey (prizes 15s., 10s., 5s., and 2s. 6d.) and Beeswax (prizes 10s. and 5s.), along with silver and bronze medals of the Lancashire B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 17.**

August 30, at Reading.—Honey Show of the Berks B.K.A., at Forbury Gardens. Schedules on application to D. W. Bishop Ackerman, Hon. Sec., 161, King's Road, Reading. **Entries close August 26.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16**

August 30 and 31, at Osmaston Park, Derby.—Derbyshire B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances. Fifteen classes (four open). For entry forms apply R. Coltman, 49, Station Street, Burton-on-Trent. **Entries close August 26**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes. Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelitown, Dumfries. **Entries close September 2.**

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

Notices to Correspondents & Inquirers.

(Col.) A. M. P. (Penmaenmawr).—Bees not Swarming.—If the hive has not already swarmed it is not likely to do so this year. If a swarm was desired the stock should not have been given additional room by supering in May, as stated, and it is more than probable that swarming has been deferred, if not altogether prevented, by so doing. On the other hand, it is possible that a swarm has issued unseen and been lost, seeing that the bees were "hanging out" at beginning of July.

H. C. (Truro).—Observatory Hives.—You would have no difficulty in obtaining a glass-sided fame-hive for observation purposes, from any leading dealer in bee-appliances; or a second-hand might be had cheap if advertised for. These hives are not so often used now as formerly.

J. D. (Harrogate).—Swarming Troubles.—1. The parent stock must be examined again after having swarmed, to make sure that it has a laying queen. Otherwise it will need re-queening. It is quite possible it may have a mated queen wise it will need re-queening. 2. It is impossible to give such instructions as will enable anyone to find a queen if the sight is defective. 3. It need cause no alarm to see immature drones cast out in variable weather. 4. Dead queen was smashed in post.

Anxious (Mexboro').—Removing Bees from Roof of House.—With so many as five lots of bees in roof of your house, it would be a hopeless task for us to give instructions for removal and for any but an experienced bee-man to carry out the operations required. Your best plan will be to get someone who knows how to handle bees well to advise you after surveying the premises and the bees at work.

F. C. Bowskill (London, S.W.)—Claiming Runaway Swarms. — 1. The case you name is fully reported in July *Record*. 2. We trust you will ere long be enabled to find a cottage outside where bees may be kept with advantage; for it is very gratifying to find a Londoner so full of interest in bee-keeping as to "read both our weekly and monthly papers with pleasure for two years," and being now devouring Mr. Cowan's "Guide Book" in the hope of making a start.

F. Hoad (Sussex). — The most suitable work on bees is the "Guide Book" issued from this office, price 1s. 8d. post free.

Honey Samples.

H. O. (Cardiff).—The four samples sent are beautiful specimens of white clover honey, flavour, colour, aroma, and consistency all being very good.

E. M. M. (St. Asaph).—Honey Samples.—1. The honey sent had all run out of comb into package, making a disagreeable mess, and preventing us from judging its quality. It seemed good in colour, but thin, and mainly from white clover. 2. Both samples of comb-foundation are good, the pale yellow one being quite equal to the white sample. We should like to have name of firm from whom you are getting such inferior goods.

M.D.B.K.A. (Honiton).—Sample is mainly from limes. The flavour is only fair, and consistency poor. It is not up to show standard.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

NEW HONEY, 58s. per cwt., packages free; 5s. refunded if packages returned; 28lb. tins, 15s. 6d.; packages free; 1s. 6d. refunded if packages returned in good condition. Sample 4d.—OWEN BROWNING, Ashley, Kingsomborne, Hants. J 17

SEVEN STOCKS BEES, in "W.B.C." Hives, FOR SALE, owing to removal; healthy; cheap.—Apply TODD, Lydeway, Devizes. J 1

A GOOD, Healthy Ten framed STOCK, in "W.B.C." body box, for one guinea.—CHADWICK, Expert, 52, Gid Pirk Lane, Sombpert. I 95

EXCHANGE 78 14 ounce screw cap jars, or Taylor's No. 4 Hive (painted 1905), for 12 good Sections or 14lbs. English Clover Honey.—STANLEY WRIGHT, Crompton Road, Macclesfield. J 15

SEEDLING blood red Wallflowers, 1s. 3d. per 100, post free. They are invaluable to bee keepers for spring forage.—THOMPSON, Apiary House, Gowdall, Snaith, Yorkshire. J 14

Editorial, Notices, &c.

THE "CLAUSTRAL" HIVE.

The Abbé Gonttefangeas writes to say respecting the suggested improvement of our correspondent "W. E. E. C."—whose letter appears on page 224 in our issue of June 8—that he does not think it will succeed. In fact, M. Gouttefangeas considers that the only improvements possible are in the number, position, and size of the perforations, or it may be in the tubes themselves.

GLAMORGAN B.K.A.

ANNUAL SHOW AT CARDIFF.

In connection with the Cardiff and County Horticultural Society, the G.B.K.A. held its chief show of 1905 at the charming Sophia Gardens, Cardiff, on July 26 and 27 in perfect weather. The entries numbered 143, establishing a record for the Association, and being very far ahead of any previous year, though in some cases articles were entered but not staged.

The show-ground was thronged each day, and the result was the most satisfactory exhibition in the Association's history. Competition in the extracted honey class was especially keen owing to the excellent quality of honey staged. The Rev. W. Henry A. Walters and Mr. T. I. Weston officiated as judges, and made the following awards:—

Twelve 1-lb. Sections.—1st (and Silver Medal), G. P. Workman, Llanishen; 2nd, W. H. Williams, Llandow, Cowbridge; 3rd, J. Boyes, Cardiff.

Six 1-lb. Sections.—1st, C. Hood, Clemenstone, Bridgend; 2nd, G. P. Workman; 3rd, G. H. Mitchell, Cardiff.

Three Shallow Frames of Comb Honey. 1st, R. Morgan, Cowbridge; 2nd, J. Boyes.

One Shallow Frame of Comb Honey. 1st, R. Morgan; 2nd, J. Boyes.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st, W. T. Gunter, Cowbridge; 2nd, W. H. Williams; 3rd, J. Rees, Lisvane; 4th, C. Hood; v.h.c., Messrs. Morgan and Boyes.

Six 1-lb. Jars (Light) Extracted Honey.—1st, W. T. Gunter; 2nd, W. H. Williams; 3rd, C. Hood; v.h.c., J. Rees and Messrs. Morgan and Boyes.

Twelve 1-lb. Jars (Dark) Extracted Honey.—1st, G. P. Workman (Bronze Medal); 2nd, C. Dare, Llanbaron.

Six 1-lb. Jars (Medium or Dark) Extracted Honey.—1st, J. O. Jones, Llanishen; 2nd, G. P. Workman; 3rd, W. H. Williams.

Articles of Food Containing Honey.—1st, G. H. Mitchell. (Other exhibits disqualified.)

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, E. C. R. White, Newton Toney; 2nd, W. H. Williams; 3rd, C. Hood.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st, the Rev. G. Leigh-Spencer, Clifford, Hereford; 2nd, W. T. Gunter; 3rd, W. H. Williams; v.h.c., Messrs. Morgan and Boyes.

Beeswax (not less than 1 lb.).—1st, E. C. R. White; 2nd, R. Morgan; 3rd (extra), Messrs. Morgan and Boyes.

Collection of Appliances.—1st, E. J. Burtt, Gloucester; 2nd, John Hibbert and Sons, Cardiff.

Observatory Hive, with Queen and Bees.—1st, Louis Snelgrove, Weston-super-Mare; 2nd, T. W. Roberts, Penarth.

The Rev. W. Henry A. Walters gave lectures and demonstrations each day, which were well attended. The children of elementary schools in the town were admitted on the second morning at a penny each, and any description of the scenes round the bee-tent would be very inadequate. About 7,000 gained admission. Mr. Walters tried to lecture before them on "Some Habits of the Busy Bee."—WM. RICHARDS, Hon Sec., Gabalfa, Cardiff. July 31.

STAFFS B.K.A.

SHOW AT NEWPORT.

In connection with the Newport (Salop) Agricultural Society's Exhibition, a honey-show was held by the Staffs B.K.A. on July 27. Mr. John Kendrick Stone judged the exhibits, a task, which on account of the excellent honey staged, was a difficult one. Mr. Joseph Tinsley, Expert of the Staffs B.K.A., gave an interesting lecture in the bee-tent, and the questions put to the lecturer at the close of his address proved that it was appreciated.

Six 1-lb. Jars of Run Honey.—1st, H. Bowers Fieldhouse, Standon, Eccleshall; 2nd, J. Carver, Victoria Avenue, Wellington; 3rd, J. Clay, Albert Road, Wellington; r., Miss H. Worrall, Hopshort, Cheswardine, Market Drayton; h.c., J. Churton, Wollerton, Market Drayton; E. White, Peatswood Farm, Market Drayton; c., W. Leedham, Peartree Lodge, Sheriffhales, Newport.

Six 1-lb. Jars of Granulated Honey.—1st, J. Clay; 2nd, J. Churton; 3rd, G. Evans, Bromstead, Newport.

Six 1-lb. Sections of Comb Honey.—1st, J. Carver; 2nd, J. Clay; 3rd, J. Evans, Bromstead, Newport; r., G. Evans; c., Miss H. Worrall.

Sample of Beeswax, in any form (not less than 2 lb. in weight).—1st, J. Carver; 2nd, Miss H. Worrall.

REVIEWS.

The A.B.C. of Bee Culture, by A. I. Root and E. R. Root. Published by the A. I. Root Company, Medina, Ohio, U.S.A.; price 1 dol. 50 c.—This work of 490 pages is a complete cyclopædia of everything pertaining to bees and bee-keeping. It was first originally compiled by A. I. Root, who in the 1877 preface states that "a great part of this A.B.C. book is really the work of the people, and the task that devolves on me is to collect, condense, verify, and utilise what has been scattered through thousands of letters for years past." As a practical bee-keeper, Mr. Root tested in his own apiary new devices, so that this A.B.C. was written from personal experience. Since the first copy of this work appeared, twenty-five years ago, it has undergone many revisions and has had many additions both of letter-press and illustrations, while the rapid advancement in bee culture has made it necessary in many cases to remove whole articles and re-write them entirely. The revision has been conscientiously carried out with scrupulous care by E. R. Root, the present editor of *Gleanings*, who has in the preface given credit to the various writers for their articles, and has throughout the book given his authorities, thus making the work of practical use to the student. It seems almost superfluous to say anything about a book of which this is the one-hundred-thousandth impression, for this of itself shows that it is filling a want, and is an attestation of its worth. We have nothing but good words for this work, and recommend those of our readers who have not already got it to obtain a copy of the 1905 edition. The work is profusely illustrated and beautifully printed, and reflects great credit on the publishers.

Commercial Queen-rearing. Cell Getting, by "Swarthmore." Published by E. L. Pratt, Swarthmore, Pa., U.S.A.; 50 c. (or B.B.J. Office, 2s. 1d.).—This is the third in a series of papers on apiculture by "Swarthmore." To those who already have "Baby-nuclei" this paper will be most useful, as it describes the method of getting cells by means of the labour-saving pressed cup and interchangeable flange shell plan. Mr. Pratt states the conditions under which queen-raising is conducted at swarming time, and then shows how these conditions can be obtained by artificial means. The important elements necessary for the construction of good queen-cells are:—Large numbers of young nurse bees, generous supply of food, and unretarded generation of heat and bee moisture. These are the natural swarm points, and the better one learns how to supply them the better will be his queens when reared artificially. In this pamphlet of forty-two octavo pages Mr. Pratt shows how an abundance of queen-cells can be obtained by using only "Swarthmore" removable shells. The method of making and waxing the wooden cups is fully described and illustrated. The whole process from beginning to end is carefully explained and illustrated by diagrams and half-tones from photographs taken by Mr. J. M. Hooker, which add to the value of the work. We recommend this pamphlet to those taking an interest in commercial queen-rearing.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

WHICH IS THE BEST SECTION?

[5960.] "I am discarding both the 4¼ plain section and the 4 by 5 plain in favour of the old standard—the much-abused 'squatty old woman,' the behind-times old sections that a writer in *Gleanings* once said should be taken and 'stamped out of sight in the mud.' Foolish? Never mind. Our Western markets all specify 'no more 4 by 5 sections,' and I have other reasons." So much from Mr. Attwater, one of the honey giants of the New World. Now, I wonder how many in this country have come to the same conclusion. Can it be sung of the "New Century section" as was sung of the "Farthingale" centuries ago?—

> "Alas, poore farthingale must lie i' the streete,
> No house or doore for them now is founde meete"

Perhaps being so far out of the world makes me unaware of the progress they have made—retrograde progress.

When the controversy was on some years ago I took part in the discussion purely from the point of view that their good points had not been demonstrated, that our present "standard" size had many excellent features, and that it would be folly to rush into change on any larger scale unless it was clearly proved that the change would be for the better. This was not then accomplished, nor has it since been done, or even attempted. I had not at that time, nor have I now, any animus,

or even dislike, to the new innovation; and, indeed, I would have rejoiced if, even against my own contention in 1891, it had been proved by results that we had obtained something better, and I would have been the first to congratulate the champion of change; but I fear we are still no nearer perfection. The plain no-bee-way with fence separators has made no great progress, and large honey-producers do not care to handle them. The finish is not, as a rule, so good; they do not pack so well, and are more subject to injury in handling, so that grocers are shyer of them than of the $4\frac{1}{4}$ bee-way. I do not make these last statements on my own authority, as my experience is too limited to be trustworthy. What we want in regard to all these classes of section is the truth, not mere theoretical opinions; and I think the time is ripe for a discussion on the subject, so that we may have some authoritative data to build upon in coming to a conclusion which is best. If the tall section has special merits, they should be fully patent after five years' trial.

Introducing Queens.—Mr. Woodley (in 5942) anticipated a note I had written on the use of tobacco-smoke. I think it is reliable, and all that he claims for it. But be careful not to use too strong tobacco. It stupefies the bees, makes them reel about as if drunken, and too many have a special desire to evict themselves from the hive. I have had good results, too, from the use of brown paper strongly impregnated with a solution of saltpetre; also with very heavily tainted paper wrapped round candles. The strong pronounced odour in each case must have temporarily taken all fight out of the bees, leading to the safe introduction of an alien queen. It is well known that our forefathers, before the days of smokers, used the pipe extensively, and I know some who still look on it as the best smoker. I do not.

Fixing Foundation in Frames.—Opening up one end of top-bar is a simple and easy way to fix up foundation, but it tends to weaken the frame somewhat. In any case, fix in a piece of cardboard at end cut the thickness of the saw-scarf, when the metal end will just fit tightly over it. A better way is to obtain or make a board, say, about 18 in. by 6 in., into the centre of which drive two medium-sized brads, to protrude about 1 in., and about 4 in. apart. These keep the saw-cut open, and a small angular wedge, kept in position by a small board fixed on the large one, will allow the hands full freedom to insert and adjust the sheet of foundation. Screws are generally used to fix in the sheet firmly, one or two being inserted through one of the sides of the foundation, and to catch the other side. This makes all secure against a break-down. Some use a clamp which wedges all tight. It can be easily removed if desired when the comb is drawn out. A simpler way is to run the foundation slightly above the surface of top-bar, and then pass a hot iron over it. No fear of its giving way if thus fixed in. The V-shaped wedge inserted in a side slit is, however, about the easiest way of fixing in foundation, and perhaps the most reliable. By the way, I rarely drive a nail into the dove-tailed frames. If this is necessary from any cause it had better be done before the sheet of foundation is inserted, as any hammering on the frame has a tendency to make the sheet snap in whole or part near the wood, and then a break-down is inevitable.

Points for Blacks.—"The black strains would find their entrances; indeed, it is a well-known fact that black bees will find their hive much more readily than the Italians." That is one for the intelligence of my favourite race. Mr. Ernest Root is my authority. "I once hauled a lot of bees without closing the entrances sixteen miles over pretty rough roads. I was alone; the team was full of life, and entirely unused to bees, but I drove home all the way without a particle of trouble from them. They were black bees." That is one for the gentleness and docility of this race. The recorder of the incident is Mr. J. A. Green. The subject is too wide to tack on at the end of a contribution, so I leave it for next article.—D. M. M., Banff.

THE HONEY MARKET.

[5961.] One of your correspondents (5958) complains that honey is offered at 45s. per cwt. The thought arises at once, "What sort of honey?" If the colour and quality were good the price is suicidal; but, if the honey were only second grade, or lower, 45s. might be all it was worth. There are bee-keepers who, to get ready money, will always make great sacrifices without ever giving a thought of the injury they are doing to others. Bee-keepers are often praised, and rightly, too, for their fraternal qualities; but in matters of £ s. d. even brothers sometimes disregard each other's interests. Fifty-six shillings per cwt. in bulk ought to be the bottom price if quality is first-class; and, after all, *quality* is the real test of value, and the only really substantial basis upon which to attempt to erect a stable and lasting trade.

There is likely to be a fall in prices this season, as a good harvest of honey has been secured; but wise holders will keep back some of their stock, perhaps the larger part of it, for a time, if they desire to avoid a glut in the market. This is what I

propose to do, at any rate, and, from past experience, I believe it to be good policy. —W. H , Brilley, Whitney-on-Wye.

BEES AND DRY WEATHER IN YORKS.

[5962.] I put six stocks of bees in a two-acre field (used as a market garden) for a beginning this year, and they did well up to a month ago, since which time the bees have stored very little in surplus-chambers, but stored honey in their brood-chambers very considerably. On June 10, I took from two hives eight frames and seven frames of honey respectively, and being short of shallow-frames, I put four standard-size ones on another hive, which I have since increased to nine, as they were making good progress, in addition to one crate of sections which they had partly filled. We have had very little rain in our village this year, although there has been more within three or four miles of us. The consequence is that although we have had a lot of bloom around us, it has rapidly died away, and the bees do not seem able to gather much honey. I estimate our rainfall for the last three months at about half an inch only. Kindly say through your paper if it would pay me to sow half an acre of white clover or "Bokhara" clover, or can you estimate the amount of honey bees would gather off half an acre of good land sown with clover close to the hive? Of course I should cut the clover for hay when of no use for the bees, which would realise a little towards cost of seed and labour.—NOVICE, East Keswick, Leeds.

[The dry weather experienced in a few counties (Lincolnshire among others) has had an adverse effect on the honey-crop this year, and fully accounts for your bees failing to store well in surplus-chambers. We do not think, however, it would give an adequate return to sow clover on half an acre of ground for the honey it would yield. Those are best off, by far, who have white clover grown for them free of cost to the bee-keeper. EDS.]

INSERTING FOUNDATION IN FRAMES.

[5963.] I noticed an arrangement for overcoming the difficulty of inserting foundation in saw-cut of frames was given on page 292 in your last week's issue. Another very simple method by which it is possible to fit up several frames in a minute is as follows:—Drive a couple of two-inch oval nails about two inches apart in the middle of a three-quarter-inch narrow board, twenty inches in length, allowing the points of the nails to project five-eighths of an inch; turn and hammer the heads of nails level with board on the under side. Bore a few holes near the end of the board, so that when pressure against the two projecting nails forces the saw-cut well open, a nail dropped into one of the holes keeps the frame in position and the foundation is inserted without the slightest pressure.—E. R. N., Smarden.

BEES REFUSING TO WORK IN SECTIONS.

[5964.] In reply to "Anxious Bee-keeper" (page 285), I have had a similar experience, my bees, though a good stock, refusing to work in the sections. I got an experienced bee-keeper to see them. He showed me a queen-cell, and said the bees were about to swarm. I took off the section-rack, and watched them carefully for four days; but as it did not come off I rose early and put on a crate of shallow-frames, fitted with whole sheets of thin foundation. In a few hours the bees were hard at work in them, and have been since. I prefer sections, but "half a loaf is better than none." —F. J. H., Cranleigh.

CAPTURING A STRAY SWARM.

[5965.] The enclosed Press-cuttings from our local paper deal with my capture of a stray swarm which settled in the garden of St. Luke's Vicarage, Hanley, and as I had only kept bees for nine days previous to the incident referred to, I would like to know if the method I adopted to hive them was a correct one. I may say that all I know about bees has been acquired from reading the "Guide Book," and my apiary consists of two stocks in frame-hives.

Upon learning of the swarm I had no difficulty in obtaining permission to remove them, and a few hours after found me facing the swarm—which had clustered about eight feet from the ground—armed with a box such as is used for conveying bees by train, half a dozen frames of comb, and a table-cloth. I nailed one edge of the latter along the wall, about a foot below the bees, and then elevated the box (after removing the lid) about three feet from the ground and a foot from the wall. To the under-side of the box I attached the cloth, thus forming a "shoot," and having mounted a step-ladder, I jerked the bees on to the top of the frame and also on the table-cloth, from whence they slipped down on to the box-entrance. For a few minutes the air was thick with flying bees, but within a quarter of an hour the bees were in the travelling-box.

I poured a little syrup on the frames before hiving the swarm, which an expert afterwards declared to be a very large one.

Having safely fastened up my "catch"

for transit, the rest was easy, as all I had to do was to transfer the combs and bees to an empty hive which I had by me.—F. C., Endon, Staffs.

[It is plain you did nothing very wrong, or the result would have been less satisfactory, and, therefore, although the method followed might not be quite the "correct" one, it was very good indeed for a bee-keeper of nine days' experience.—EDS.]

CLEARING SUPERS.

[5966.] I notice in B.B.J. of July 20, on page 285, "D. H." refers to a plan of clearing supers recommended by "D.M.M., Banff." His plan was described in a past number of B.B.J., and I should very much like to try it. Will "D. H." please say what number it appeared in, or, better still, give instructions as to how it is done, as I have searched over and over again my back numbers of JOURNAL and failed to find it?—J. B., Colne.

MODERN BEE-CULTURE AND THE POPULAR PRESS.

[5967.] The enclosed extracts are taken from some copies of Mr. A. Pearson's *Home Notes*. They were written by a cottager who started bee-keeping this year, and made himself a hive about 12in. square. I was asked to go and see his bees, and when I saw his hive I asked where he got his directions for making it from? I was sorry to have to tell him that his start was not a promising one, as he had only about ½ lb. of bees in the hive.

The glowing promise of honey-returns from each hive and of simultaneous increase of stocks by multiplication by the third power, resulting in eighty-one stocks from a single hive in four years, will turn most people's heads from going to Klondike or poultry-farming to bee-keeping, and accounts for the oft-repeated question—Can I be assured of an income of £200 per annum if I keep 200 hives?

I do not mind signing my name to this as I think strongly about such misleading of many who might have the makings of good bee-keepers but who might become discouraged through reading such stuff.—HERBERT NEWMAN, Hon. Sec., Bishops Stortford B.K.A., July 24.

The extracts referred to are taken from *Home Notes* of June 8, 15, and 22 respectively, and read as follows:—

"It is a great mistake to have your hives too large. They should not exceed 12 in. square inside, although the usual size is about 14 in. by 14½ in."

"It is possible to obtain 300 lb. of honey from one hive during a good season, but taking an average of 80 lb. to 100 lb. you will realise a profit of about £5, besides getting a couple of new swarms which will form the foundation for a large colony in the future, or these can be sold for perhaps a sovereign each at the beginning of the season."

"The use of supers placed above the hive is not to be recommended if you wish to make a large profit on your honey"—*Home Notes*, June 8, 1905.

"With the modest addition of two swarms from each hive (and it is best not to weaken your stock by taking more), you can see how quickly your bee-farm will increase. At the end of your first season you will have three hives instead of one, but the next year those three will have multiplied to nine, increasing the third season to twenty-seven, and amounting up to the enormous total of eighty-one in the fourth season. It is a snowball system which ensures a large profit; by the sale of the new swarms alone you can make a good deal of money, and from the dozen to twenty hives retained for your own farm you will reap a huge harvest of honey."—*Home Notes*, June 15, 1905.

"As a rule, the queen-bee lives two or three years, while her industrious subjects, the workers, seldom exceed the limit of one year's life."

"From the end of the clover season until the middle of August, I would recommend that the bees should be fed with diluted honey from time to time."—*Home Notes*, June 22, 1905.

[We have often had occasion to deplore the fact that information on bee-keeping given in the "popular" Press is so often mere nonsense, and shows complete ignorance of the subject on the part of the writers. EDS.]

Queries and Replies.

[3835.] *Cross-built Combs and Transferring Bees.*—Will you kindly tell me in an early issue of B.B.J. what to do in the following case? I have lately obtained a frame-hive, but to all appearances the frames have not been moved for years; in fact, you cannot move a single frame, as all are fastened together with brace-combs as they are also to the sides of the brood-box. I want to move the bees into a new hive, which I have fitted with full sheets of wired foundation, and therefore ask: How shall I manage, and when is the proper time for the operation? I send name and sign—NOVICE, Highfield, Exeter.

REPLY.—The present time is, for several reasons, not at all suitable for transferring the bees in question. In the first place, the stock should now be strong and storing surplus honey fast, and to operate now would upset their work and cause loss of

the season's ingathering. Secondly, there will probably be a considerable amount of brood in the combs, and this brood should be left to hatch before cutting out the cross-built combs. If the above conditions are not present, there must be something wrong with the bees; therefore, in order to tell you what is best we should have some particulars on the point, failing which, our advice would be to let the hive remain as it now is till next spring, and then allow the bees to transfer themselves to the new hive by setting the old one overhead as soon as the bees are numerous enough to need room. This will probably be at the end of April.

[3836.] *Transferring Bees to New Hives.*—In May last I bought thirteen stocks of bees, in hives fitted with standard frames, which were in a very neglected state, the roofs being anything but waterproof, while some of the top-bars are almost rotten, the combs also being very old and most of them braced together. Twelve of the stocks were very strong in bees, so I put on supers, and they have all done fairly well. Four of them swarmed, and the others have each filled a box of shallow-frames and a rack of sections. But I am anxious to give the bees clean hives and get them on straight combs. The remaining stock of the thirteen being much weaker, I feared it was affected with foul brood, and in consequence destroyed all bees, etc., to prevent it spreading. I shall be obliged for any advice you could give me on the above, with regard to best time for transferring and way to proceed. My apiary consists of twelve other stocks in frame-hives, and twenty in skeps, besides the dozen first mentioned. I have always found the BRITISH BEE JOURNAL a great help to me, as is also the "Guide Book." I send name and sign—A., Hants.

REPLY.—It would appear that, notwithstanding defects and drawbacks, the hives in question have done well and are prospering, consequently the question of transferring is largely one of future comfort in handling. Our advice, therefore, is to transfer, say, one-half of the stocks, and winter the others in their present hives, to be dealt with in spring as recommended in reply to "Novice" (No. 3835) in this column. The six stocks to be transferred this season might have all frames containing brood that are movable lifted out and placed in the new hives, with new frames fitted with full sheets of foundation on each side of the old ones. By so doing no brood would be lost, and the bees would be saved some comb-building. For the rest, the bees would need to be shaken off the old combs and run into the new hives, care being taken that the queen is safely inside. No time should be lost in starting the work of transferring as soon as supers are removed. By proceeding as above advised, you will be able to compare results when the whole thirteen stocks are safely housed in new hives, when next year's honey season is in full swing.

[3837.] *The Need for "Ripening" Honey.*—1. I have taken out a few shallow-frames and extracted the contents, will you kindly say whether this honey is now fit to keep, or is it necessary to get a "ripener" for it all to be run through? 2. In B.B.J. of July 20 (page 285), your correspondent "Business, Cornwall," writes very sensibly as to honey-market. Would he object to your giving me his name that I may appeal to him as to sale of honey? Thanking you for past help, I sign—COUNTRYMAN, Dorset, July 25.

REPLY.—1. If the honey extracted is of good consistency there is need whatever for a "ripener." In fact, the appliance so named is only required when the honey is—from some cause—found to be unripe, i.e., thin and liable to ferment from lack of good consistency. Very few bee-keepers use a "ripener," preferring to leave shallow-combs on the hive till fully sealed over and ripe. 2. We will inform our correspondent "Business" of your wish and leave the matter you name in his hands.

[3838.] *Queen-cells in Sections.*—On July 1 I requeened a stock of British bees with an Italian, and on the 5th this stock sent out a strong swarm. After hiving the swarm, I removed a rack of sections from parent hive and placed same on swarm with queen-excluder between. On examining the sections on the 13th, I found the whole rack-super practically filled and sealed, and consequently removed same, replacing the full sections with empty ones fitted with sheets of foundation. On examining the sections after removing them from rack I discovered to my surprise one section with a few cells of sealed brood, and two others with a queen-cell in each containing queens in the nymph state. I have now replaced these three sections, having destroyed one queen-cell. As I am anxious to requeen another stock with an Italian, I should like to know if I could by any means utilise the remaining queen-cell, or would it be better to allow queen to hatch in the section and then introduce her to the other stock by the usual method?—R. G. A., Hampton Wick.

REPLY. — Under the circumstances we strongly advise purchase of a mated queen. The result is certain to be more satisfactory than trying to utilise a queen-cell raised under the conditions named.

[3839.] *Using Excluders Below Shallow-frames.*—I began bee-keeping a year ago last April. This year I have four frame-

hives, one of which sent out a very large swarm on May 26. The other stock has not swarmed yet, so three weeks since I reduced the number of frames to eight, and put on a box of shallow-frames, but the bees are not up yet. 1. Do you think it will swarm now? The other stock named, along with the swarm of May 26, also a swarm got from a friend, were all reduced to eight frames three weeks ago, and I gave to each a box of shallow-frames. None of the bees are working in the latter. I therefore ask: 2. Should I be safe in removing the queen-excluders from each stock? I am trying shallow-frames now, and think of putting on sections for the heather. Kindly reply in this week's JOURNAL, and oblige—B. R., Sheffield.

REPLY.—1. No, it is not at all likely to swarm. 2. We never use queen-excluder below shallow-frames, and should remove those you have on without delay.

[3840.] *Returning Swarms.*—I had a very large first swarm from one of my hives on June 19. It was duly hived, and is now working well in sections. I removed all queen-cells except two at the time the swarm came off. One of the two cells left was sealed over, the other not, and on the evening of the eighth day after the first swarm issued I removed one of the queen-cells, as I did not wish for a second swarm; but notwithstanding this, the bees swarmed again fourteen days after the first lot issued, and clustered upon two fruit bushes growing about four feet apart. I secured one cluster in the hiving skep, but the bees were very slow, and seemed unwilling to enter; however, I eventually got them in, and then carried the board and skep close to the other cluster, and I shook the bees on to the ground, when they ran in quickly. I therefore ask: 1. Would there be a queen in each cluster, or only in the second lot, which entered the hiving skep so quickly? Also, 2, is it likely that the bees had formed other queen-cells after my removing all but two on June 19? An answer in B.B.J. will much oblige. I send name, etc., and sign—T. OF CAMPSIE, Scotland.

REPLY.—1. The symptoms point to there being only one queen, and it in second cluster. 2. Not at all likely.

[3841.] *Dark-coloured Honey.*—Last year the honey in my hives was very dark; in fact, it was nearly black, so I had to leave it for the bees' own consumption. This year I have four stocks, and on looking through them last night there appeared to be about 40 lb. of honey in the shallow-frames. In three hives the honey is very clear, but in the fourth the contents of some of the cells is nearly black, while in others it is clear. This looks as if the bees are now gathering honey from something which is spoiling the colour. The honey is not yet capped over, and so I ask: 1. Do you think it advisable to extract the honey now and then ripen it by means of a ripener, as, if it is left in the hive, it may be spoilt? Also, 2, can you tell me what is the cause of the honey being so dark? I send name and sign—CONON, Keighley.

REPLY.—1. We should not trouble to extract and "ripen" the honey if it is as dark in colour as stated. It will be more profitable to leave it with the bees for winter stores. 2. Without personal knowledge of the bee-forage of your district we cannot say what causes the dark colour of honey gathered. Last year honey dew caused the mischief; this season it may be the source from which the nectar is gathered.

[3842.] *Persistent Swarming.*—I enclose queen-bee taken from a hive built up from a driven lot of bees given me last year. 1. Will you please say if she is an old one, as the stock has swarmed twice this year, but the bees were put back again each time? When they swarmed the first time I found twenty-three queen-cells on the combs. 2. Is not that a great many? I have cut out all queen-cells five times, but the bees still keep on building more, so I have taken the queen away, and am going to let the bees raise another one. There are plenty of drones in the hive. 3. Am I doing right? I only started last year, and I am following your "Guide Book." In spite of all this queen-cell building I have taken from the hive three racks of sections, some of which weigh 1¼ lb., so I cannot find much fault with the stock.—I send name, etc., for reference, and sign—WILLIAM BURWASH, Colchester.

REPLY.—1. We rather think the dead queen is a young one, but the body was too dry for *post-mortem* exam. It is the ordinary brown, or native, bee. 2. Yes, twenty-three queen-cells is an unusually large number.

[3843.] *Removing Queen-cells.* — Would you kindly answer the following questions in B.B.J.:—1. I have three queen-cells close together, and side by side. Is it possible to cut each of these out without destroying either? 2. Which is the best way to send out virgin-queens, and would you put a few other bees with her when sending away? 3. Would you name bees sent, marked Nos. 1 and 2? Your answer to same will be esteemed. I send name, etc., for reference, and sign—KARNO, Erdington.

REPLY.—1. If the cells cannot be cleanly separated without injury the best plan would be to sacrifice the middle cell in order to save the other two. 2. Always

enclose a few bees with queen when sending her away. You had better purchase a travelling cage from a reliable dealer to use as a pattern if you wish to make travelling-boxes for sending queens by post. 3. One of two bees sent is a hybrid Carniolan, the other a common brown native bee. The labels had fallen off in post, so cannot number them.

Bee Shows to Come.

August 3, 4, 5, and 7, at Liverpool.—Annual Show of the Royal Lancashire Agricultural Society. **Entries closed.**

August 7, Bank Holiday, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. **Entries closed.**

August 7, Bank Holiday, at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. **Entries closed.**

August 7, Bank Holiday, at Lichfield.—Honey Show in connection with that of Lichfield Floral and Horticultural Society. **Entries closed.**

August 9, 10, and 11, at Hull.—Show of Honey, Bees, Hives, and appliances in connection with the Yorkshire Agricultural Society.

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire Beekeepers' Association. Open class. Schedules from Mr. A. R. Moreton, Hallow, Worcester; or Mr. G. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries close August 9.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1 lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1 lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 6.**

August 19, at Chorley.—Show of Honey, etc., of the Lancs. B.K.A. in connection with the Lancashire Agricultural Society. Open classes. Schedules from secretary, P. Hodgkinson, Town Hall Sale Rooms, Chorley, Lancs. **Entries close August 14.**

August 19, at Borgue, Kirkcudbright, N.B.—Annual Show of Flowers, Honey, etc. Open Classes for Honey. Apply to Mr. Munro, The Academy, Borgue, Kirkcudbright, N.B. **Entries close August 16.**

August 19, at Burry Port.—Honey Show in connection with the Burry Port Horticultural Society, South Wales. Six open classes, including one for single 1 lb jar extracted honey, with free entry. First prize, 12s 6d.; second, 7s. 6d.; third, 4s.; fourth, 2s. **Entries close August 9.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23, at Lancaster. — Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. Open Classes for Extracted and Comb Honey, also Beeswax and Produce. Four silver and bronze medals and other specials. Schedules from Thos. Armistead and Son, Auctioneers, Lancaster. **Entries close August 14.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 26, at Barnton.—Honey Show, in connection with the Barnton Floral and Horticultural Society. Two classes open to the county and all members of the C.B.K.A. Six local classes. The Cheshire B.K.A. will present their silver medal to the winner of first prize in Open Class for twelve jars light honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 19.**

August 29, at Cartmel, Lancashire.—Honey Show, in connection with the Thirty-third Annual Show of the Cartmel Agricultural Society. Three Open Classes for Comb and Extracted Honey (prizes 15s., 10s., 5s., and 2s. 6d.) and Beeswax (prizes 10s. and 5s.), along with silver and bronze medals of the Lancashire B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 17.**

August 30, at Reading.—Honey Show of the Berks B.K.A., at Forbury Gardens. Schedules on application to D. W. Bishop Ackerman, Hon. Sec., 161, King's Road, Reading. **Entries close August 26.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 9, at double fees August 16.**

August 30 and 31, at Osmaston Park, Derby.—Derbyshire B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances. Fifteen classes (four open). For entry forms apply R. Coltman, 49, Station Street, Burton-on-Trent. **Entries close August 26.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 2, at Bramhall, in the grounds of Bramhall Hall.—Bramhall and Woodford 16th Annual Show. Three open classes for honey and wax; four to district; C.B.K.A. medal offered. Prizes 15s., 10s., 7s. 6d., 5s., 3s., 2s. Schedules from John Sibson, Hon. Sec., Hawthorn Grove, Bramhall, Stockport.

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1 lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes. Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 13, 14, and 15, in Waverley Market, Edinburgh, along with Great International Flower Show. Four open classes for Sixes, Sections, and Bottles of Flower and Heather respectively, with prizes of 15s., 10s., 5s., and 2s. 6d., for an entry fee of 2s. each class. Schedules now ready from W Weir, Secretary, Heriot, Midlothian.

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

October 3 to 5, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

J. H. H. (Trindon).—Risks in Taking Hives to the Moors.—1. There is no doubt more or less risk in taking bees to the moors for the heather-season and allowing them to stand near other hives unless precautions are taken to prevent infection. With this end in view it is the custom of some bee-keepers—who club together and rent stands for their bees—to employ a caretaker, and use other means in order to avoid such danger as you fear. If diseased stocks were sent last year to the locality chosen by yourself for the coming heather-season, the use of preventives would certainly lessen the risk, but not remove it entirely. 2. One box of naphthaline, used as directed, will suffice for the whole thirteen hives, and would last till winter.

Combe (Temple Combe).—Novices Exhibiting at Shows.—The very elementary questions asked make it almost certain that, without some little experience of "shows," you could not hope for success on the show-bench. For the rest we reply: 1. All sections must be "glazed" on both sides, which means putting them in glassed cases to be had from dealers. 2. Extracted honey must be carefully strained to remove all particles of wax, etc. 3. Granulated honey is usually that produced in previous years to that when shown. 4. Hints on packing honey appeared in a recent issue of the B.B.J.

A. C. T. (Maldon).—Insect Nomenclature.—The insect "seen carrying a green leaf into a hole in a wall" was, no doubt, the *Megachile*, or leaf-cutter bee. It is in no way allied to the hive-bee; but its method of cutting the leaf, generally from a rose-tree, in pieces of suitable size and shape for its purpose, is exceedingly curious and interesting.

S. V. (Sutton Valence).—Hybrid Bees.—The Carniolan bee is notable for its gentle temper and quietness when handled. Hybrid bees, whether Ligurians or Carniolans, are at times very vicious, but not always so.

W. H. R. (Hellingly).—Bees Refusing Super Foundation.—It is not at all an unusual occurrence for bees to refuse to work on some makes of white—or bleached—foundation, such as sample sent.

Heather (King's Heath).—Varieties of Heather and Bee-forage. — 1. Most heaths, including *Erica cinerea* and *Calluna vulgaris* bloom from first week in August to end of September. 2. The lime ceases blooming at latter end of July. 3. The sprig of heather sent is *E. cinerea*. It blooms earlier than the *Calluna vulgaris*. 4. Honey sample is from mixed sources, but chiefly from clover. Its chances on show-bench depend largely on the finish and general appearance of the sections. If these points are good the honey sent would not be an important drawback. 5. The "Bee-keepers' Note Book" (price 1s. 1d. from this office) contains information, with working plans, regarding a bee-house and how to build it.

J. A. C. (Keighley).—There is only a slight trace of Ligurian blood in dead queen sent.

Wilts (Marlborough).—Spacing Frames.—We cannot understand your bees building drone-comb in frames spaced $1\frac{1}{4}$ in. from centre to centre, seeing that drone-brood in frames so spaced will not allow a bee-space between the face of sealed cells.

Doubtful (St. Heliers, Jersey).—A Beginner's Inquiries.—1. A "ripe" queen-cell is known by the bees having removed some of the wax from the point, or "capping," of the cell, as if to assist the young queen in cutting the cap from inside of cell. 2. If frames are returned same day (after extracting) the super may remain without closing up the frames in the interim. 3. It is quite easy for a practised hand to tell from the outside if bees are gathering honey fast; but it is next to impossible to put it in words, so we will not try. 4. During the

busy honey-gathering time supered hives are disturbed as seldom as possible unless there are good reasons for so disturbing. This is the only rule we can lay down, as bees do nothing invariably, and cannot be managed by "rule-of-thumb." 5. A good bee-keeper can, by opening a hive, tell if it has sent out a swarm that day, but a beginner would perhaps find it difficult to do so, and must be content to wait till he learns by experience. It is impossible for us to write it all down, for reasons given above.

(Rev.) J. M. C. (Hunts).—Sections Granulating.—There is no reliable method of preventing honey in sections from granulating during the winter. In some seasons it will suffice to keep them in a warm, dry cupboard, while other years the honey will—under the same conditions—become quite solid. We have heard of honey gathered in your county during the past six weeks already granulating fast. It will, therefore, be a wise precaution to use up section-honey before the year closes.

W. C. H. (Aberdeen).—Driving Bees from Swarmed Skep.—All the brood will have hatched out in latter twenty-one days after the issue of first or top swarm. Some bee-keepers, however, defer the driving until they can be sure that the young queen raised in parent skep has been safely mated and is laying.

Honey Samples.

L. B. W. (Staplehurst).—Sample is of beautifully clear golden colour, a shade too dark for the light honey class, but good in flavour. It is also rather too thin to win in a keen competition.

Enquirer (Great Chesterford).—We cannot think that your sample would lose points because of its colour at the hands of a competent judge. We consider the colour very good indeed, as is also the flavour. It is lacking in consistency, but otherwise a good sample.

J. H. O. (Throapham).—Sample is of good colour and flavour. If you can ripen it a little by letting it stand in warm water for a day or so it would stand well on the show-bench.

Cymraes (Anglesey).—Your two samples are very good indeed in flavour and colour; one is rather better in consistency than the other, but both are well fitted for the show-bench.

G. E. F. (Stoke).—Regarding No. 1 sample, we cannot judge honey sent in a small phial of green glass. It may have been partly gathered from hawthorn, but the flavour is completely spoilt by bees visiting privet blossom. No. 2 is better in flavour, but only fair in quality. Liquid honey should never be sent in a tin box. It invariably escapes in post, and causes "messiness" everywhere. No sprig of heather was sent.

G. T. W. (Pirbright).—Sample "A" is one of the thinnest honeys we ever saw. It runs like water. We think it is almost wholly from hawthorn, and flavour is fairly good, as is also the colour. If of good consistency it would not be at all a bad sample, but it resembles thin syrup in this respect. "B" is much the same, but less bright in colour.

B. E. B. (Acton).—Sample No. 1 is chiefly from the limes, and fairly good in flavour and colour. No. 2 is not, as supposed, deteriorated by honey-dew. The rank flavour is, we think, acquired from the various yellow-flowering weeds that grow abundantly on uncultivated land.

M. C. D. (Dunmow).—Sample is very good in flavour and colour. It is suitable for showing, and but for being rather thin would stand a good chance of winning.

H. B. (Cronkbourne).—Sample sent is a splendid specimen of honey for show-bench, and ought to be entered. Very good in all points.

J. C. (Belfast).—Sample sent is good in colour and flavour, though slightly too thin for a first-class honey. If properly ripened this prejudicial quality will be removed, and we should think it would stand a good chance of winning on any show-bench. It has been gathered from white clover.

Honey Bee (Cannock).—No. 1 is a very good honey gathered from white clover quite suitable for exhibition purposes. No. 2 is not so good either in colour or flavour as No. 1, and it is also much too thin. It contains some white clover, but is mainly gathered from mixed sources.

Suspected Combs.

Albanian (St. Albans).—There are slight signs of incipient foul brood in comb, but the bulk of dead larvæ seems to have perished from lack of bees to keep the brood warm.

Amateur (Arran).—We cannot trace any disease in comb, but appearances point to the bees having suffered from want of food.

J. W. G. (Kincardineshire).—Strong Stocks Suspected.—Comb sent is affected with foul brood; but it appears as if the strong vitality of bees has enabled them to keep it under, and it should be a suitable case for saving bees as directed in "Guide Book."

C. P. (Woodbridge).—Slight traces of incipient foul brood in comb sent.

T. J. R. (Gateshead).—We regret to say that piece of comb is affected with foul brood.

******* *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

ROYAL LANCASHIRE AGRICULTURAL SOCIETY.

SHOW AT LIVERPOOL.

The annual show of the above society was held at Wavertree, Liverpool, on August 3, 4, 5, and 7. The number of entries (totaling 4,800) created a record in the history of the society, exceeding by over 700 those of any of its previous exhibitions.

The bee-department—with which we are mainly concerned — looked exceedingly well, and was one of six sections of the show wherein the number of exhibits went beyond those of any former year, the entries numbering 140. With regard to quality, we question if the County Palatine has ever before seen so fine a display of high-class honey on the show-bench. A glance at the prize list will confirm this by the awards beyond the number of prizes offered. The six competing trophies — along with one staged by Mr. George Rose as "not for competition"—made a most attractive display, occupying the whole centre of the tent, the sides being filled with honey of high quality, both in comb and jars. So uniformly good was the exhibits which received awards at the judges' hands that it must, in many cases, have occupied a considerable time in arriving at the respective degrees of merit.

Unfortunately the first day of the show was spoilt by heavy rain, which fell for almost the whole time, and, of course, considerably lessened the number of visitors. The large attendance on the remaining three days did much, however, to remove the disappointment and no doubt the final result will enable those most concerned to include the show of 1905, as a whole, among the society's greatest successes.

Messrs. Herrod, Luton, Beds, and Jas. Cragg, Great Eccleston, Garstang, judged the honey exhibits, and made the following awards:—

OPEN CLASSES.

Twelve 1-lb Sections (15 *entries*).—1st (£2 and B.B.K.A. silver medal), A. W. Weatherhogg, Willoughton, Lincs; 2nd (£1), Wm. Woodley, Beedon, Newbury; 3rd (10s.), Rev. R. M. Lamb, Burton Pidsea Rectory, Hull; v.h.c., J Pearman, Derby, Mrs. E. Sopp, Crowmarsh, and J. Helme; c., J. E. Williams, Moorhampton.

Twelve 1-lb. Jars Extracted Honey (33 *entries*).—1st (£2), T. S. Holdsworth, Kirton Lindsey, Lincs; 2nd (£1), Joseph Taylor, Cronton, Prescot; 3rd (10s.), Mrs. E. Sopp; reserve No., R. Morgan, Cowbridge; v.h.c., J. Boyes, Bridge Street, Cardiff, and A. W. Weatherhogg; h.c., W. J. Cooke, Binbrook, Market Rasen, Chas. H. Bocock, Ashley Apiary, and Wm. Woodley.

Twelve 1-lb. Jars Medium-coloured Extracted Honey.—1st (£1), J. Helme; 2nd (15s.), Geo. M. Tune, Llangollen; 3rd (10s.), J. Jones, Wegber Quarry, Carnforth.

Two Frames of Comb Honey for Extracting.—1st (£1), E. C. R. White, Salisbury; 2nd (10s.), Jas. Stirzaker, Poulton-le-Fylde; 3rd (5s.), F. E. Hinde, Ledsham, Cheshire; reserve, J. Hale, Croston, Preston; v.h.c., E. L. Parkes, Hooton, Cheshire, H. Fenney, Lea Green, St. Helens, and F. Rowe, Rainhill.

Twelve 1-lb. Jars Granulated Honey.—1st (£1), J. Pearman, Derby; 2nd (15s.), J. Boyes; 3rd (10s.), J. Helme.

Twelve 1-lb. Sections Heather Honey.—1st (£1), J. Pearman; 2nd (10s.), J. M. Balmbra, Alnwick; 3rd (5s.), Thos. Walker, Estwaite, Lancs.

Best Wax, etc. — 1st (15s.), E. C. R. White; 2nd (10s.), J. Pearman; 3rd (5s.), C. Lodge, Chelmsford, Essex; v.h.c., R. Morgan, Cowbridge, J. Boyes, J. Berry, Llanwrst, and Mrs. F. Harris, Sibsey, Lincs.

The Most Interesting and Instructive Exhibit connected with Bee-keeping not being of the nature of a Trade Exhibit.—1st (£1 10s.), Joseph Gray, Long Eaton.

COUNTY CLASSES.

Trophy of Honey (7 *entries*).—1st (£2 10s. and Challenge Cup given by Mr. Geo. Rose), A. S. Dell, Leigh, Lancs; 2nd (£1 10s.), J. Jones; 3rd (£1), Cook and Alty, Tarleton, Preston; h.c., M. Lowe and H. Fenney, Rainhill.

Twelve 1-lb. Sections (12 *entries*). — 1st (£1 10s.), J. Jones; 2nd (£1), Thos. Walker; 3rd (10s.), J. Stirzaker; v.h.c., Thos. Ormesher, Ormskirk.

Twelve 1-lb. Jars Extracted Honey (26 *entries*).—2nd (£1), John Wilson, Rainhill; 3rd (10s.), Jas. Higham, Rainhill; reserve, R. Rymer, Hesketh Bank, Preston; v.h.c., F. Sharples, Rainhill, and W. H. Grace, Halewood; h.c., J. Ingham, Farnworth, T. Ormesher, and W. and G. Dawson, Ormskirk.

Mr. Wm. Herrod, in addition to his duties as judge, lectured in the bee-tent on each day to large and appreciative audiences.

HANTS AND ISLE OF WIGHT B.K.A.

SWANMORE BRANCH.

The annual show of this branch was held in Swanmore Park on August 1 in connection with that of the Bishop's Waltham Horticultural Society. 1,179 lb. of honey was staged, being about double the quantity exhibited last year, and although the bad effects of honey-dew have been much felt in Hampshire this season, little evidence of it appeared in the exhibits, the

quality of which was, on the whole, excellent. The entries for the County Competition deserve special metion for all-round excellence.

The Rev. W. E. Medlicott acted as judge, and made the following awards :—

Twelve Sections.—1st, W. G. Hedges ; 2nd, A. Royds, jun. ; equal 3rd, Miss Martin and E. Ainsley.

Six Sections.—1st, W. G. Hedges ; 2nd, E. Ainsley ; 3rd, A. Royds, jun. ; 4th, Miss Martin.

Three Sections.—1st, W. G. Hedges ; 2nd, E. Ainsley ; 3rd, Miss Martin ; 4th, E. Sandall.

One Section.—1st, E. Sandall ; 2nd, W. G. Hedges ; 3rd, E. Ainsley.

Honey Trophy.—1st, W. G. Hedges ; 2nd, E. Ainsley ; 3rd, E. Hedges.

Twelve Jars Extracted Honey.—1st, W. G. Hedges ; 2nd, E. Ainsley ; 3rd, E. Hedges.

Six Sections and Six 1-lb. Jars Extracted Honey.—1st, W. G. Hedges ; 2nd, E. Sandall ; 3rd, E. Ainsley.

Three Sections and Three 1-lb. Jars Extracted Honey. — Equal 1st, W. G. Hedges and E. Sandall ; 3rd, Miss Martin ; 4th, E. Ainsley.

One Section and 1-lb. Jar Extracted Honey.—1st, W. G. Hedges ; 2nd, Miss Martin.

Three Jars Granulated Honey.—1st, W. Cooper ; 2nd, W. G. Hedges.

Two Shallow-frames.—1st, E. Sandall ; 2nd, W. G. Hedges ; 3rd, E. Hedges.

MEMBERS ONLY.

Twelve Sections and Twelve Jars Extracted Honey.—1st, W. G. Hedges ; 2nd, E. Sandall ; 3rd, E. Ainsley. These prizes carry the Silver Medal, Bronze Medal, and Certificate respectively of the County Association

Special prizes for wasps' nests were also awarded to E. Hedges and W. G. Hedges.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[5968.] I am glad to see our friend "D. M. M." in his notes last week refers to "best section." Now, I have never taken to the no-beeway. I gave them a fair trial when first introduced, but could find no advantage in using them ; in fact, I considered there was a disadvantage compared with the two-beeway, which is the style of section I use. We are also still old-fashioned enough to fix our foundation with the roller. The split top may, in some bee-keepers' hands, answer better when fixing the foundation in the sections, but the split is always an eyesore to me when they are filled. Of course, where bands are used for glazing the split is covered up, but where cases or narrow one-inch strips are preferred it is ever in sight with its strip of wax showing. I tried a crate or two with "Shepherd" dividers, and although the bees could move about among the sections quite well, I failed to discover any advantage over the slotted, or, for that matter, over the old-style dividers, which we used to cut out ourselves from a sheet of thin zinc twenty or more years ago.

Wax-moth.—This pest is still with us, although one is always on the alert to destroy both moth and larva when seen, yet they manage to exist, and are ever ready to spy out a weak hive, in which they multiply at an alarming rate ; therefore, the bee-keeper should by timely supervision of any stocks not up to full strength find out if the wax-moth has gained an entrance, and, if so, deal with the evil promptly. The presence of the enemy is easily seen by the signs of webbing connecting one comb to the next, and the larva can be found on pulling the combs apart. Stocks which have been allowed to swarm themselves into uselessness are often the prey of the wax-moth.

The month of August is the best period to lay the foundation of a successful season the year following—first, by seeing that every hive or colony is headed with a good young queen ; secondly, that the hive contains a sufficient supply of stores to carry the bees through the winter months ; thirdly, have the roofs painted to preserve the hives, and, what is of more importance, keep the colony strong during the autumn and winter. Where stores are not sufficient, a few pounds of syrup should be given towards the end of this month, as this will help in two ways—by increasing the stores and inducing breeding. This will ensure the colony going into winter quarters with a good proportion of young bees.

The honey-crop already secured should be removed from the hives now ; all sections should be scraped free from every particle of propolis and brace-comb, and be graded to suit the market of the individual bee-keeper. I find that many have no convenience to store honey for any considerable time, and are, therefore, obliged to find an early market for their produce. Sec-

tions, when scraped, may be stored preferably in a dry, warm cupboard, or in the racks in which they have been worked. Place a piece of paper at the bottom of the rack, and, after it is full, wedge up tightly with another piece of paper on the top of the sections. If racks are of the correct height at the sides, several of them can be stacked one on top of the other without injury to the honey, always being careful to keep the bottom one a good height off the floor to prevent *damp* reaching the honey.

The period of shows is with us again. To those who aspire to appear as prize-winners I would say: Extract and jar off your honey a few days before you send it to show. See that any scum which rises is skimmed off the top before packing, and simply place each jar in a corrugated-paper envelope. Do not wrap in paper as well, as it adds to the work of those staging.—W. Woodley, Beedon, Newbury.

EXPERIENCES WITH BEES.

[5969.] Some time ago I promised to send you a few lines giving an account of a beginner's experience, and hope these notes will interest your readers. Late in July, 1903 I purchased a swarm, together with four empty hives, from a bee-keeper, and quite anticipated getting some honey; but on making enquiry was told I was too late for that season, which naturally rather disappointed me. Not knowing what I should have to do to keep my bees alive through the winter, I asked a neighbouring bee-keeper for advice, which was not given very liberally; in fact, he simply told me to feed them. Being desirous of obtaining information, I then tried several times to raise a conversation on the subject of bee-keeping; but instead of getting encouragement I got the reverse, as I was told that bees did not pay, and I would be out of pocket if I kept them. However, I eventually came across a good friend, who told me to get the B.B.J. I ordered it through my newsagent right away, and felt I had come across a gold mine in obtaining a paper solely devoted to bees. At first when I read the B.B.J., it all seemed very mysterious and almost like something foreign; but I gradually grew accustomed to the terms used in bee-keeping and their meaning. In the Journal I saw "Modern Bee-keeping" advertised, which I sent for and read through several times. Meanwhile I was feeding my bees up for winter. Becoming more and more interested in these little insects and their ways, I next purchased Mr. Cowan's "Guide Book" and Root's "A.B.C. of Bee-culture," and studied both till I felt I had mastered them thoroughly.

My next step was to join the Cumberland Bee-keepers' Association, which I did in 1904, and received a visit from the expert. I had up to this time a great dread of being stung, and used a wire and net veil to keep the bees off my face, two pairs of gloves, and a pair of old stocking-legs on my hands and arms. When spring arrived, I began to make use of the knowledge I had gained from reading during winter, and found I was quite able to manage my bees. I bought several nuclei and built them up, made artificial swarms, raised queens, and formed nuclei of my own. I was working for honey with my first stock, but found a slight trace of foul brood, so I followed the method advised in "Guide Book" of making an artificial swarm and destroying combs, and had a busy day boiling or burning and disinfecting everything belonging to the hive. I felt amply rewarded for my exertions when the expert on examining my apiary this year (1905) pronounced them all perfectly healthy.

I exhibited at our local flower-show and obtained second prize for my honey, and found such a ready sale for it that I was obliged to buy to supply my customers, as I had sold all my own. During the early spring and summer I helped to manipulate other bee-keepers' stocks for the sake of the experience, and gained such confidence and knowledge by doing this that I no longer wore anything to protect my hands and seldom used a veil. Feeling rather proud of my success I next entered for my expert's certificate, but was sorry I could not be examined, as the examiner had more students sitting than he could get through that day. As I arrived rather late I was consequently left out, which made me more determined than ever to obtain the certificate, although I had to wait till this year. I sold 400 lb. of honey last season, but expect to double it this year. Everything in "Canny old Cumberland" has been ideal for the bee-man; fine days and white clover have both been plentiful. When on the Fells the other day I found bell heather in bloom; the true ling is just beginning to open, and with good weather and sunshine bee-keepers ought to reap a golden harvest from the moors. So much for the bees—I will say a few lines on the other side. I make a number of hives, appliances, etc., and have built up quite a nice business. I think you will agree, Messrs. Editors, that though this all looks encouraging for a beginner, you must bear in mind it has been the result of hard work from 5 a.m. till late at night, and no one can expect to do as I have done unless he is handy with joiner's tools, likes hard work, is a great lover of bees, as well as being a good salesman and adaptable to circumstances. I am a draper by trade and commence work at 8.30 a.m., finish at 7.30 p.m., but I give

my bees all my half-holidays, and many a half-day's work is done before starting my ordinary business in the morning. In the height of the season I employ a good joiner to help me. I sell all my honey retail at 1s. each section and jar, but make it a strict rule to sell nothing but the very best quality. I paper lace all my sections, then place them in a neat-printed cardboard box with a gold and white label of my own designing. Should I have any dark or "off-grade" honey I feed it back to the bees, or use it myself. My idea of bee-keeping is—and I advise all beginners to follow my example—give your bees a good, clean, comfortable home, be liberal to them in giving time and food, keep them warm and snug, and they will repay both capital and interest. In placing honey before the public be scrupulously clean in handling it; put it up in dainty packages and make it look as attractive as possible.

In conclusion, I must say a word or two about price of honey. I consider that 1s. for section or 1-lb. jar is a reasonable price which will remunerate a bee-keeper for his work, for capital invested, risk of disease, uncertainty of weather, and a chance of losing a runaway swarm. Then let the extra honey harvest of a good year of plenty help to balance a bad year of scarcity and loss by keeping up a universal retail price of 1s. per lb.

When selling honey in large quantities (one cwt. lot or more) there are other things to take into consideration. The retailer must have his profit, and quite right too; but good ripe honey of first-rate quality should always be worth 56s. to 60s. per cwt. in bulk. This leaves the retailer a fair margin of profit after paying for bottles, labels, carriage, and labour.

I am pleased to see in the B.B.J. that I have passed my exam. which I sat for this year.—L. B., Workington, Cumberland.

CLEARING SUPERS.

[5970.] I have much pleasure in referring "J. B., Colne" (p. 305) to B.B.J. of October 13, 1904 (p. 407) for D. M. M.'s article on the above, and as there may be other readers who would like fuller details of the method, may I add that one should first bore a hole about five-eighths of an inch anywhere in the bridge-piece used over entrance to the "Cowan" and "W. B. C." hives. It can be filled up with a bit of pinwood at any time after the supers are taken away; or, if the tools are not at hand, a hole cut in one edge of bridge-piece with a small piece of slate or wood laid on top afterwards will do. Replace bridge-piece and outer case, prise up supers about an eighth of an inch, give one puff of smoke at each of the four sides, take quilts off supers, put on carbolic cloth (one that has been dressed a week previous) and remove surplus-chambers. Then put quilts over body-box, replace surplus-chambers over the quilts, take off carbolic cloth, put on lift and roof (with me it does not seem necessary to darken it), and when the operator goes to the hives two or three hours afterwards he will not find more than half-a-dozen bees in the supers.

No bees inside, or prowling robbers outside, no stings, no disturbance, no grumbling, but all smiles from the *particular* party who assists in the extracting-room.

Again, thanks to "D. M. M., Banff."—D. H., Deddington.

EARLY SWARMS AND THE CAPACITY OF SKEPS.

[5971.] Occasionally a bee-keeper tells me that he likes skeps better than frame-hives because they swarm sooner! Thinking this matter over the other day, I measured the inside capacity of six ordinary cottagers' skeps, and they varied from 650 to 968 cubic inches each, the average being about 795 cubic inches per skep. I then found that the capacity of five standard frames is about 818 cubic inches, which it will be noticed is slightly more than the average skep. It seems to me therefore that a bee-keeper can have his frame-hives swarm as soon as his skeps if he will keep them contracted to five frames. I also notice that skeppists are quite contented if their stocks left for winter weigh gross between 20 and 30 lb. each, and yet they wonder why these skeps swarm in late June or July, instead of in May! When we calculate that a skep with its live bees (some brood possibly, and beebread) may weigh anywhere up to 10 lb., it does not leave a large amount of stores even in a 30-lb. skep; and if a cold, late spring should come, who can wonder that this skep swarms on, say, June 25 instead of about May 28? An old bee-keeper recently drew my attention to a last year's "cast," and pointed out with pride how well (?) it was doing. He said he believed it weighed about 15 lb. last autumn, and seemed to quite forget the fact that had he then fed it up heavily, he would probably have had a swarm as well as a cast from it this season, instead of nothing at all. I am one of those who think that queens fly out for an airing in spring and frequently get lost or killed. I had five strong stocks with abundance of brood and eggs when I examined them in March (without smoke), and a month later they had neither queen, brood, nor eggs! I also think it a better plan to supersede old queens myself than to take the risk of allowing the bees to re-queen themselves.—AMATEUR, Cheltenham.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

July, 1905.

Rainfall, ·35 in.
Heaviest fall, ·11 on 10th.
Rain fell on 4 days.
Below average, 2·16 in.
Sunshine, 240·8 hours.
Brightest day, 7th, 14·5 hours.
Sunless days, 0.
Above average, 4·8 hours.
Maximum temperature, 79° on 14th.
Minimum temperature, 46° on 20th.
Minimum on grass, 44° on 20th.
Frosty nights, 0.
Mean maximum, 72·7.
Mean minimum, 58°.
Mean temperature, 58·5.
Above average, 4·8.
Maximum barometer, 30·25 on 19th.
Minimum barometer, 29·83 on 1st

L. B. BIRKETT.

JULY RAINFALL.

Brilley, Herefordshire.

Total fall, 1.09 in.
Heaviest fall in 24 hours, .50 in., on 1st.
Rain fell on 9 days.

W. HEAD.

Queries and Replies.

[3844.] *Bee-forage.—The White Sage of California.*—1. I shall feel obliged if you can tell me the source of the enclosed sample of honey. A few days since I looked over a two-acre field of white clover and then wandered on to a fell where a quantity of wood-sage (*Teucrium scorodonia*) grows. For one bee working in the clover there were ten in the sage. 2. Is this sage the same plant as the Californian white sage (*Ramona polystachia*) mentioned by Prof. Cook in "Gleanings," June 15 (page 647)? 3. Is wood-sage considered to be a good plant for bee forage?—J. W. L., Keswick, July 25.

REPLY.—1. Sample sent is, we think, mainly from white clover; the darker colour being derived from an admixture of honey from the wood-sage as stated. But the flavour of your sample is not appreciably deteriorated by the sage, though it alters the colour from pale yellow to deep golden. The preference of the bees for wood-sage blossom would probably be attributable to the weather at the time of your visit, because, given suitable weather, there are few places on which bees will work harder or more readily on than a good stretch of white clover. 2. The white sage of California is quite different from the wood-sage of this country. It is so named from the nearly white colour of the leaves and stalks; growing, as it does, from three to eight feet high on the sides of the vast canyons of that State. With scores of flowers on every stem, and continuing in bloom for many months, it yields an abundance of excellent honey, and forms probably the finest gathering-ground for bees in the whole world. 3. The wood-sage is classed as yielding 50 per cent. of honey and 20 per cent. pollen. It is enumerated among the good bee-forage plants.

[3845.] *Bees in Roof of Old Cottage.*—I have recently purchased this cottage, which is a very old one. It is partly covered with "weather-tiling," inside of which a colony of bees has been established for many years. No one seems to know how long they have been there, but it must be at least thirty or forty years, possibly much longer. We have not, so far, found the bees troublesome, but should be glad to get rid of them. Can you give me any advice on the subject? I suppose the only method would be to smother the bees; but would it then be necessary to remove the dead bees along with the honey? That would be a serious matter, as it would entail removing the "weather-tiling" off a large part of the cottage, and as it is probably from 200 to 300 years old we should never be able to replace it in the same way. If the bees are smothered and not removed would the old honey become a nuisance? I send name, etc., for reference, and sign—(MRS.) J. E. K., Petworth.

REPLY.—If the bees can be smothered and their entrance-hole completely stopped up we do not think any trouble would result from leaving bees, combs, and honey to remain where it is for all time.

[3846.] *Faulty Super-clearers and Making Artificial Swarms.*—I shall be glad if you will enlighten me on the following two points through the medium of your paper: 1. When using a super-clearer on my hives for some reason or other it does not work, and the bees instead of going down quietly to the brood-nest in the course of the night are shut in and become frantic in their efforts to escape. In this case, I ask:—What is the best to be done? It has happened to me twice, and I have simply had to lift off the super, set it down, and bolt, and on returning after a short time I felt very sorry the thing had not worked properly. 2. When preventing swarming by taking one comb with queen and bees, then putting same in a body-box with empty combs and placing the bulk above with excluder between, how do you deal with the drones which would be shut in above?—R. D. G., London, E.C.

REPLY. — 1. Your super-clearer is at fault. Is it a genuine "Porter" or a badly-made imitation? 2. Your method of making an artificial swarm is wrong. No

excluder is used in the process as described in "Guide Book."

[3847.] *Building Up Stocks from Driven Bees.*—Will you kindly reply to following queries through your valuable paper? 1. About what date bees should be driven from skeps so as to build them up into stocks in frame-hives? 2. How many pounds' weight of bees is needed to stand the winter well and be strong in the following spring? 3. How much feeding would be required, and how long to be continued? 4. Does the queen lay after the driving?—H. F., Chichester, July 25.

REPLY.—1. The earlier the better, if choice of date rests with yourself; if not, get them as soon after middle of August as you can. 2. Five pounds is a fairly safe lot with which to form a stock if headed by a good queen. 3. The bees should be fed rapidly until they have 20 to 25 lb. of sealed food in the combs for wintering on. The food should be given warm, after sundown, in a "rapid feeder" holding a couple of quarts of syrup. 4. It is very important to start the queen in the work of brood-rearing as soon as possible after the bees are hived; and, with this in view, queens hatched in the current year should, if possible, head the newly-formed colony. Old queens at head of driven lots of bees are of very little value, and rarely form a good colony the following season.

[3848.] *Dealing with Unfinished Sections.*—I have two racks of sections, both more than half full of sealed comb, but the front and back sections are untouched. Would it be advisable to take both off and replace into one rack the half-filled and empty sections, or leave them both on the hive? The bees seem to have stood still for a fortnight.—A. B., Brecon.

REPLY.—By all means remove all completed sections at once, and replace unfinished ones in one rack as proposed. You should also wrap up as warmly as possible, in order to keep bees from deserting the sections on cold nights. The difficulty in getting sections completed late in the season is conserving the warmth of supers; to do this extra coverings should be used.

[3849.] *Preventing Robbing.* — I have lately fitted a "Claustral" chamber to one of my hives, thinking that—as well as for other purposes—it would be useful in a bad case of robbing, but as it would also exclude the rightful owners from entering, do you think that a "Porter" escape fitted on outside of door and painted over to give a foothold would be used by the bees as an entrance?—F. J. H., Cranleigh.

REPLY.—We do not advise trying a "Porter" escape for the purpose, but if your hive is fitted with "Claustral" detention-chamber robbing could be "nipped in the bud" by closing the door of chamber. It would be better to keep any few bees—that might be away in the fields—outside till a chance moment allowed of their re-admission, than try so poor a substitute as the "Porter" escape. Prevention of robbing is one of the useful purposes for which the "Claustral" hive is adapted.

[3850.] *Yellow Queen from a Colony of Blacks.*—Will you kindly tell me whether the accompanying queen is old or young, and name the variety of bee to which she belongs? She came from a stock of black British bees that had not swarmed for two seasons, and on examining the hive I found a newly uncapped queen-cell and the accompanying queen. I shall have re-queened the hive by to-morrow evening with a black queen. Does the light colour of the insect I am sending denote foreign blood? So far as I know there are no foreign bees kept within a radius of two miles of my place.—M. D. H., Windsor, July 28.

REPLY.—The dead queen sent is quite young, and apparently a virgin. We think, however, that there must be some error—unintentional, no doubt—in the above statement, which conveys the impression that the queen in question "came from a stock of black British bees in which a newly-hatched queen-cell was found." We say this because it is incredible that a stock with a native black queen at its head could produce a well-marked yellow Italian queen from the egg of a black or native mother (over two years old), whose progeny has up to now shown no foreign blood, or of the mother-bee having been mated with a foreign drone.

[3851.] *House Martins and Bees.*—Will you or some of your ornithological friends kindly inform me whether house-martins prey upon bees? There is a large colony of these birds close to my apiary, and I am very unwilling to disturb them unless under compulsion for the sake of my hives; but yesterday I thought I saw a martin—probably a young one—capture a bee on the wing. I shall be very glad to be assured that my eyes were deceived.—W. H. HARRIS, Hayes End, near Uxbridge.

REPLY.—We have had no personal experience of damage to bees by the house-martin. Perhaps some reader may be able to enlighten our correspondent on the point.

[3852.] *Bees not Entering Supers.*—I shall esteem it a favour if you would advise me on the following case:—I have four hives of bees, two of them May swarms. They have all been supered with shallow-frames for more than five weeks, and only one lot has gone up. I want to take my bees on to the moors for the heather in a day or two, and so I ask: 1. Would it be best to put them on a rack of sections each or leave the shallow-frames on? 2. Can you

say in B.B.J. why the bees have not gone into the supers, as each hive is crowded, and has eight frames half-full of brood. I send name, etc., for reference, and sign—JOURNALIST, Sheffield.

REPLY.—There is no need for giving sections, as the shallow-frames will afford ample storage-room at the heather, even under the most favourable circumstances. The honey income must have failed for some reason in your district.

[3853.] *Dealing with Foul Brood—Salisbury as a Heather District.*—In the spring one of my stocks was badly infested with foul brood, so about the end of May I got bees off combs, destroyed all frames, combs, etc., and thoroughly disinfected the hive. I kept the bees fasting for forty-eight hours, then returned them on full sheets of foundation and fed with medicated syrup for a fortnight. They are now going on splendidly, and I see no sign of foul brood on any of the eight frames. What I would ask is: 1. How long will it be before I can be sure of a cure being certain? 2. Is Demerara sugar suitable for syrup and candy-making? 3. Can you or any of your readers inform me of the nearest heather to Salisbury that it might be profitable to send hives to? I enclose name, and thank you in anticipation of reply.—UBIQUE, Salisbury.

REPLY.—1. The test of "cure being certain" will be absence of any dead brood in cells at end of season. 2. No; it is quite unsuitable for the purpose. Use only refined cane sugar, either "loaf" or in crystals. 3. We will be glad if any reader possessing local knowledge will reply to this query.

[3854.] *Transferring Bees and Combs.*—I have just bought a wooden box containing a stock of bees, which I understand have not been disturbed for twelve months, and I am anxious to transfer them into a new hive. Would you please inform me: 1. If this is the right time of year to do this, and whether I should transfer some of the comb to the new hive? 2. Is the operation of transferring the bees better done at night when they are all hived. Your reply will oblige.—F. W., Romford, Essex, July 31.

REPLY.—1. If the combs in box are not old and black, or mis-shapen and crooked, they should be transferred early this month in order to get the stock settled in their new home, with a full supply of winter stores, before cold weather sets in. All comb containing brood must be transferred to the new hive. 2. You cannot well operate at night; but the work should be done after sundown, or when the bees have ceased flying for the day. We presume you have had some little experience of transferring bees and combs, otherwise we cannot promise an unqualified success.

[3855.] *Using the Super-clearer.*—When using the super-clearer with "Porter" bee-escape, is it correct to put quilts over the top of the sections to be emptied, or should the top be left open so that the bees may find their way out through the bee-hole under the eaves of the roof?—B. W. B., Alton, Hants.

REPLY.—The coverings of section-rack must be left on so that bees are compelled to pass down into hive-body. It will hinder instead of helping the bees to leave the sections if they are allowed egress from above.

[3856.] *A Bundle of Elementary Queries.*—I shall deem it a favour if the enclosed can be answered in the B.B.J. I am reluctant to trouble you to such an extent, but am encouraged by the thought that the answers might help some others of your many readers besides myself. 1. Why do bees reject dark pollen left on flight-board sometimes, when brought home by their own workers? 2. How do you account for honey, when candied in winter, breaking jars at times? 3. Is it right when cutting queen-cells out to remove also most of the drone-cells seen? 4. Is it right to pick out drones when seen on combs and kill them? 5. My colony No. 1 sent out a swarm, which went into hive No. 3; I added extra supers to latter, but two days later swarm came out of No. 3. Three weeks after I could not discover any brood or eggs or queen. Could you explain this happening? 6. Will you kindly name one or two of the best firms to buy queens? 7. Which kind of queen would you recommend, foreign or English, or a cross between the two? I send name, etc., and sign—LEARNER, Suffolk.

REPLY.—1. If a bee drops a pollen-pellet by accident at hive entrance it never returns to pick it up, for the good reason that while able to roll up the pollen-dust and store it in the pockets provided on the bee's hind legs, it is unable to reload its tiny burden in one lump. 2. Only by the expansion and contraction of the glass at different temperatures. 3. Superfluous drone-brood is generally cut out when found. 4. We should not like so gruesome a job, though it may be "right." 5. Only by stating that by some accident the hive No. 3 must now be queenless. 6. Any of our leading advertisers will supply queens. We cannot recommend any one firm to the exclusion of others. 7. It is simply a matter of personal preference. We like either natives or pure foreigners better than hybrids.

[3857.] *Bee-forage.*—I enclose a sprig or two of a plant which I believe is called lucerne, and shall be glad if you would let me know through B.B.J. whether it is

good for bees. If so, please say whether you think they gather much honey from it. There is a field in full bloom near my apiary, and, as my bees have gathered some nice honey this season, perhaps they have got some from this source. It is certainly of a similar class to the clovers, and is mowed down two or three times a year and given while green to sick horses, etc. The flowers do not often reach full bloom before they are mown down. We have had a good season here for honey, but the fields are now dried up, as we have had no rain for about a month, and there are only the limes and this flower now for bees to work on. I send name, etc., for reference, and sign—W. H., Derby.

REPLY.—The plant is Medicago Sativa, or lucerne, and is a valuable honey plant of the clover family. It flowers from May to June; but, unfortunately, as in your case, it is seldom allowed to bloom by the farmers.

Echoes from the Hives.

Wandlake, Oxon, July 29.—The season in this part of the country has been very disappointing, though there was a wealth of flowers during June and the early part of July, for some reason the secretion of nectar was very small. Sections were filled slowly, and, in many cases, left unfinished, except during one week in this month, when the bees worked well. Owing to the cold in May, my stocks were kept very much indoors, so that when the warm weather arrived they took the swarming fever badly, and nothing one could do seemed to stop them. Several of my first swarms came out when the weather was anything but favourable, and many stocks in the neighbourhood followed their example, and, as a result, the bees were very bad-tempered; indeed, I never remember being stung so much in hiving swarms before. Although all swarms not required were returned and extra room given, they did very little work. One redeeming feature in this summer's work is that the honey gathered is of good quality, and quite free from honeydew. Last year my hives averaged 55 lb. each; this season I am afraid the average will not be half so much, but when I have finished taking off supers I will let you know. The season is practically over now; white clover is dried up, as is also the second blossom of the sainfoin, and as there are no lime trees here of any consequence, the only remaining source is bramble blossom. The charlock, from which we often get nearly half our honey-crop yielded scarcely anything this year. I have never had foul brood amongst my bees, but there are two infected hives in the parish, which are in my charge, so I hope soon to eradicate it. — THIRD-CLASS EXPERT.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 9, 10, and 11, at Hull.—Show of Honey, Bees, Hives, and appliances in connection with the Yorkshire Agricultural Society.

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire Beekeepers' Association. Open class. Schedules from Mr. A. R. Moreton, Hallow, Worcester; or Mr. G. Richings, 2, Shrubbery Terrace, Worcester.

August 16, at Bishop Stortford.—Honey Show of the Bishop Stortford and District B.K.A., in connection with the Horticultural Society's Show. Six open classes for honey, including trophy 50 to 100 lb. weight. Liberal prizes. Six classes for members, with free entries to members. Bee demonstrations in tent. Schedules from Rev. H. Newman, hon. sec., Brent Pelham, Buntingford, Herts. **Entries closed.**

August 16, at Wye.—Kent Honey Show. Numerous classes for Honey and Bee products. Liberal cash prizes. Open Classes for single 1-lb. section, 1-lb. jar light extracted honey, 1-lb. jar dark ditto, with prizes of 20s., 10s., and 5s. in each class. Open Classes for Honey Trophy and for Frame-Hive. Bee demonstrations and numerous other attractions. Schedules (enclose stamp) from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 11.**

August 16, at Fleetwood.—Honey Show, in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cock, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries closed.**

August 19, at Chorley.—Show of Honey, etc., of the Lancs. B.K.A. in connection with the Lancashire Agricultural Society. Open classes. Schedules from secretary, P. Hodgkinson, Town Hall Sale Rooms, Chorley, Lancs. **Entries close August 14.**

August 19, at Borgue, Kirkcudbright, N.B.—Annual Show of Flowers, Honey, etc. Open Classes for Honey. Apply to Mr. Munro, The Academy, Borgue, Kirkcudbright, N.B. **Entries close August 16.**

August 19, at Burry Port.—Honey Show in connection with the Burry Port Horticultural Society, South Wales. Six open classes, including one for single 1-lb. jar extracted honey, with free entry. First prize, 12s 6d.; second, 7s. 6d.; third, 4s.; fourth, 2s. **Entries closed.**

August 23, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in St. Mary Head. Six open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne. **Entries close August 16.**

August 23, at Lancaster. — Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. Open Classes for Extracted and Comb Honey, also Beeswax and Produce. Four silver and bronze medals and other specials. Schedules from Thos. Armitstead and Son, Auctioneers, Lancaster. **Entries close August 14.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. Eight open classes for honey. Classes with free entry for single 1-lb. jar and single 1-lb. section. Schedules from S. Cartwright, Hon. Secretary, Shawbury, Shrewsbury. **Entries close August 11.**

August 26, at Barnton.—Honey Show, in connection with the Barnton Floral and Horticultural Society. Two classes open to the county and all members of the C.B.K.A. Six local classes. The Cheshire

B.K.A. will present their silver medal to the winner of first prize in Open Class for twelve jars light honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 19.**

August 29, at Cartmel, Lancashire.—Honey Show, in connection with the Thirty-third Annual Show of the Cartmel Agricultural Society. Three Open Classes for Comb and Extracted Honey (prizes 15s., 10s., 5s., and 2s. 6d.) and Beeswax (prizes 10s. and 5s.), along with silver and bronze medals of the Lancashire B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 17.**

August 30, at Reading.—Honey Show of the Berks B.K.A., at Forbury Gardens. Schedules on application to D. W. Bishop Ackerman, Hon. Sec., 161, King's Road, Reading. **Entries close August 26.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of the C.B.K.A. Open classes for Hives, Sections, Extracted, Wax, and Observatory Hives. Numerous classes for members. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close at double fees August 16**

August 30 and 31, at Osmaston Park, Derby.—Derbyshire B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances. Fifteen classes (four open). For entry forms apply R. Coltman, 49, Station Street, Burton-on-Trent. **Entries close August 26.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 2, at Bramhall, in the grounds of Bramhall Hall.—Bramhall and Woodford 16th Annual Show. Three open classes for honey and wax; four to district; C.B.K.A. medal offered. Prizes 15s., 10s., 7s. 6d., 5s., 3s., 2s. Schedules from John Sibson, Hon. Sec., Hawthorn Grove, Bramhall, Stockport.

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes, Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 13, 14, and 15, in Waverley Market, Edinburgh, along with Great International Flower Show. Four open classes for Sixes, Sections, and Bottles of Flower and Heather respectively, with prizes of 15s., 10s., 5s., and 2s. 6d., for an entry fee of 2s. each class. Schedules now ready from W Weir, Secretary, Heriot, Midlothian.

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1 lb. jars, and supers any weight Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

October 3 to 5, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

*** "E. G." dating from Hickstead, Cuckfield, writes:—"Could any reader of the B.B.J. kindly tell me what the chances are for successful bee-keeping in East Grinstead?"

W. S. (Blackpool).—Re-queening Stocks in August.—With so many as eight stocks to re-queen, you should have started operations a month or more ago, and raised queens for the purpose. It is now too late for this; therefore, the best course will be to try and obtain surplus queens at a low price from a reliable man who deals in driven bees. It is rather risky to trust to virgin queens because of the chance of them failing to mate in August.

B. P. (Ponthir, Mon.).—Selecting Honey for Showing.—Your best course will be to get the paper on "Judging Honey" read by Colonel H. J. O. Walker at the meeting of the B.B.K.A. about a year ago. It was published in the B.B.J. at the time, and can be had post free for 2½d. We could not afford space in this column for the full particulars required, but, among other things, it will be very helpful if you can manage to visit a honey show in order to examine the prize exhibits.

J. S. (Streatham).—Bee-forage.—No. 1 is the common lime, *Tilia Europea*. No. 2, *Tilia petiolaris*, or late flowering lime. Both are good honey-bearing trees.

J. P. (Derby).—Insect Nomenclature.—The insect sent is the *Sphinx atropos*, or "death's head moth." It is supposed to frequent bee-hives for the purpose of stealing the honey. Usually found in potato patches.

C. C. (Cheltenham).—Faulty Comb-foundation.—The sample sent is made from exceedingly soft wax, but, apart from this, we cannot understand its being sent out for use in brood-chambers. The cell-base in your sample measures only

a shade under one inch for four cells, and is, in consequence, practically drone-cell foundation.

W. Ruck (Surrey).—Warm-packing for Sections.—1. There should be no difficulty in packing sections warmly—to conserve the warmth—while giving free ventilation in brood-chambers to prevent swarming; and it is quite certain that bees will not readily take to sections that are not made cosy and warm. 2. The "death's-head moth" (*Sphinx atropos*) is an enemy of the bee because of robbing the hive of its stores. Being an abnormally large moth for this country, it no doubt consumes a good deal of honey.

A. L., jun. (Oswestry).—1. Tin "Feeders" Used on Diseased Stocks.—There should be no difficulty in removing all risk from these by boiling well before using again. 2. A letter will reach its destination if addressed "Mr. S. Cartwright, Sec., Shropshire Bee-keepers' Association, Shawbury, Shrewsbury.

G. H. (Basingstoke).—Treatment of Foul Brood.—The hives that have been burned are, of course, prevented from doing mischief; but those on which "Izal" has been poured—to prevent the spread of infection—might as well have been left without the remedy, as it will do no good.

E. M. M. (St. Asaph).—Interchangeability of Appliances.—1. We quite agree with regard to the nuisance caused when lifts, roofs, etc., are not interchangeable. Your best course will be to order from the firm who have taken over the business of the maker (now deceased) whose goods gave such satisfaction. They will no doubt supply a "repeat order" if the date be given. 2. Your honey should not be thin this year if properly ripe when removed from the hives.

Novice (Winton).—Bees Beneath Floor of "Hencote."—1. There should be no great difficulty in removing bees and combs from the place mentioned. 2. Since you ask "if they are wild ones, as there are some very large bees among them," we should like to see a sample before replying.

White Heather (Devon).—Making Honey Confectionery for Profit. — 1. We fear there is not sufficient demand for sweetmeats and condiments in which honey is used to make it worth while to take up the manufacture of such as a sole occupation. 2. It is difficult and rather costly to give a sufficiently distinct flavour of honey to "butterscotch" to make a speciality of it. 3. We do not think there is any one whose sole business it is to manufacture honey confectionery.

C. H. W. (West Bromwich).—Transferring Stocks after Swarming.—Instead of transferring bees and combs from parent skeps to a 'W.B.C." hive as proposed, we advise you to winter the bees in the old skep, and let them transfer themselves in spring. If this course is followed, you will only need to make sure that the parent skep has a fertile queen, and, if the stock winters safely, set it above top-bars of frame-hive in April, or so soon as the bees cover all combs in skep—as directed in "Guide Book."

"Jack Philomel" (Doddington).—Brandy Casks for Storing Honey in.—We should not advise the use of brandy casks for honey intended for market, even if "washed out" as stated. The aroma, if not flavour, of the spirit would be certain to communicate itself to the honey, and thus cast doubt on its genuineness.

R. M. (Rugby).—Village Bee Clubs.—We are much obliged for account of your "village bee club," and will, when the busy season is over, be glad to publish particulars sent. The crowded condithion of our pages will no doubt explain our holding it over for the present.

G. E. K. (Lenton).—Bee Nomenclature.—The bee sent is a worker of the bumble-bee (*Bombus terrestris*). The nest may be allowed to remain, being quite harmless.

Constant Reader (Bury St. Edmunds).—Building Up Stocks from Driven Bees.—See reply to "H. F., Chichester," in query and reply column.

L. C. B. (Teddington, Middlesex).—Visiting Apiaries.—No doubt any of our advertisers owning large apiaries would be very pleased to show a visitor over the place who had it in view to make a start with bees. We will be glad to publish addresses of any friends willing to oblige our correspondent.

Honey Samples.

J. D. W. (Warrington).—Both samples sent are beautiful specimens of white clover honey, being good in all points. They would, in our opinion, stand a very good chance of winning on show-bench.

W. G. H. (Newport).—Sample of honey sent is fairly good, but both colour and flavour seem slightly spoilt by a taint of smokiness. It would be improved in appearance by being strained through a flannel sieve. It is quite saleable, but not good enough for exhibition purposes.

M. V. (South Cornwall).—Honey from Ivy.—The above honey is perfectly wholesome as food, but, being coarse in flavour, is seldom used for the table.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

NORTH NORFOLK B.K.A.

ANNUAL SHOW.

The annual show of the North Norfolk Bee-keepers' Association was held on Bank Holiday in the beautiful park at Melton Constable. A large number of entries were staged, the competition in the extracted-honey classes being very keen and the quality good. The comb-honey lacked finish, but the prize-winners in the open classes were good; the rest of uneven quality. The awards, made by Mr. T. I. Weston, were as under:—

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, W. Fake, Massingham; 2nd, J. Mayer, Hemblington; 3rd, W. J. Norman, Harpley.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Fake; 2nd, J. Rayner, Bayfield; 3rd, H. W. Woolsey, Edgefield; r. and v.h.c., Rev. A. Downe-Shaw, Kettlestone; v.h.c., E. Mann, Hempstead.

Six 1-lb Sections.—1st, S. Mayer, senr., Hemblington; 2nd, J. Graveling, Thornage; 3rd, S. Smalls, North Creake.

Six 1-lb. Jars Extracted Honey.—1st, S. Smalls; 2nd, H. Maddison, Foulsham; 3rd, G. W. Woolsey; v.h.c., B. Bennett, Bale, and Rev. A. Downe-Shaw.

Beeswax.—1st, Rev. A. Downe-Shaw; 2nd, J. D. Softley, Massingham; 3rd, W. Fake.

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, W. J. Norman, Harpley; 2nd, W. Fake, Massingham; 3rd, S. J. Mayer, jun.

Twelve 1-lb. Jar Extracted Honey.—1st, W. Fake; 2nd, H. W. Woolsey; 3rd, W. Towler, Edgefield; v.h.c., E. Mann, and J. Carr, Briston.

Single 1-lb. Jar Extracted Honey.—1st, W. Fake; 2nd, H. Maddison; 3rd, G. W. Woolsey; 4th, J. Platten.

Single 1-lb. Section.—1st, S. J. Mayer, jun.; 2nd, S. Mayer, sen.; 3rd, W. Fake; 4th, J. D. Softley.

"*Challenge Cup*" *for Best Exhibit of Honey.*—W. Fake, Massingham.

The bee-tent was surrounded by an interested crowd several times during the day to hear Mr. Cooke lecture on "The Methods of Modern Bee-keeping."—*Communicated.*

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of July, 1905, was £5,357.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

PROFITABLE BEE-KEEPING WITHOUT COST.

A NOVEL EXPERIMENT.

A gentleman—whose singleness of purpose is beyond question—has formulated a scheme, which is entirely novel in this country, having for its sole purpose the encouragement of bee-keeping as a home pursuit. The idea is to afford an opportunity for persons, suitably located in given areas, to test, free of cost to themselves, the advantages, or otherwise, of bee-keeping when conducted on modern principles and with up-to-date appliances.

Before going further, it may be well to say that the gentleman in question, though owner of the Ditton apiaries, must not be included among those whose connection with bee-keeping relates only to the business standpoint. In fact, his interest in bee craft is entirely confined to its possibilities as a profitable home-hobby for those to whom the pleasure derived therefrom will be enhanced by any profit that may be secured from the labours of the bees. With this object in view a neat little pamphlet has been prepared and distributed this season, the salient points of which appear below, and we are informed that the offer to supply bees and hives has already been accepted by a number of persons residing in the district within the area of the map shown.

On first hearing of the scheme, we ventured to express to the promoter our high appreciation of his public-spirited and philanthropic effort and our hope that it would be an unqualified success. The following reply explains itself, and is of interest as showing that the experiment may be tried elsewhere if found worthy of further extension. It reads as under:—

"DEAR SIRS,—I thank you very much for your encouraging letter, and have asked the printers of the pamphlet to forward electro of the map you refer to. It is very good of you to take an interest in my modest efforts to popularise bee-keeping in a small corner of the country, but if the attempt proves at all successful, I shall have much pleasure in co-operating with others in different parts of the country who are inclined to make a small initial sacrifice to encourage bee-keeping.

Again thanking you,—I remain, Yours truly, ..."

To avoid what might possibly become a troublesome personal correspondence the name and address of writer are omitted, but letters addressed "E. G.," under cover to this office, will be forwarded.

In conclusion, we are glad to observe that the scheme is framed on sound business lines, so that no undue advantage may be taken on either side. This will be gathered

from a perusal of the details as printed below.

"The owner of the Ditton Apiaries, being desirous of encouraging bee-keeping on modern principles in the neighbourhood of Pinkneys Green, Maidenhead, is prepared, as an experiment, to lend a limited number of modern bar-framed hives, with bees and accessories, as per schedule, to householders within the area shown below.

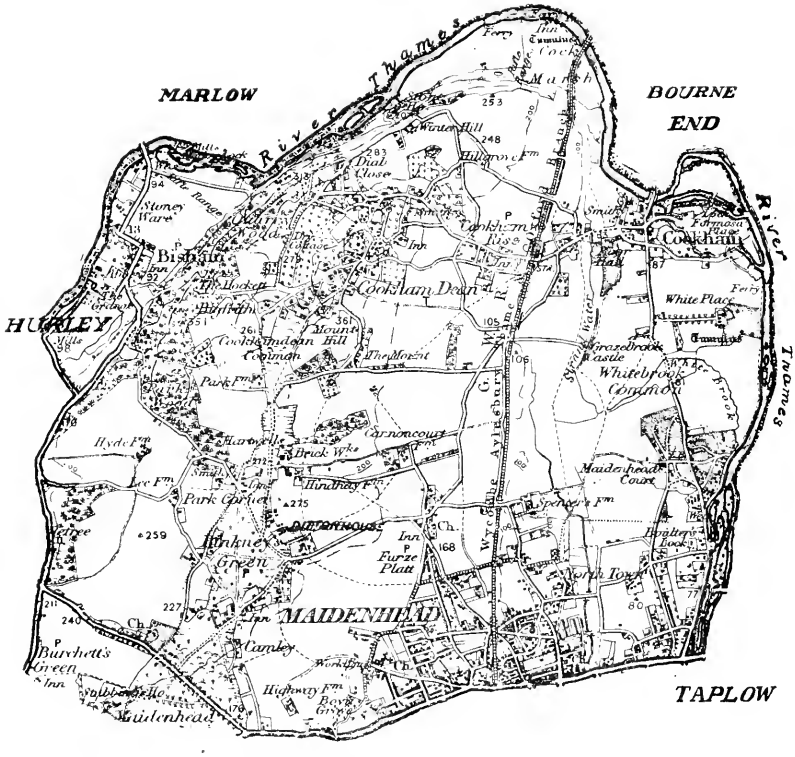
Not only will no charge whatever be made for the loan of the hives and stocks, but the hirer will be presented with one-half of all honey produced in the hive loaned to him. No promise, however, can be made as to the probable yield of honey, as this depends very much upon the state of the weather, the strength of the stock, the period of the season when the hive is installed, and other circumstances.

The hives will be periodically inspected and attended to by a representative of the Ditton Apiaries, and the hirer will not be expected to do anything to the hive or bees except by arangement if he wishes. All he will be asked to do is to provide a suitable position in his garden for the hive and a place for a few appliances.

Every encouragement, however, will be given to the hirer to make himself acquainted with the manipulation of the stocks, and advice will be given to such as desire to study and practice apiculture.

The owner reserves to himself the right to remove the hives at the end of the honey-harvest, or at any time, if they are found to be affected by disease, or are not properly protected, or he may at his discretion change them entirely or in part.

If a hirer passes the third-class examination of the British Bee-keepers' Association, he will be presented with a hive and stock complete, as per schedule, and also a copy of the book, "The Honey Bee," by T. W. Cowan.



The value of the hive, bees, and accessories, as per schedule, is £2, and any hirer who desires to become the owner of the same may purchase them, if he wishes, by instalments.

SCHEDULE.

(1) Modern frame-hive, holding ten standard frames, fitted with wired foundation or comb. (2) Swarm of bees. 3. Two section-racks. (4) Queen excluder. (5) Veil. (6) Smoker. (7) Feeder. (8) "British Bee-keepers' Guide Book" (by T. W. Cowan). (9) Record book.

CONDITIONS OF HIRE.

(1) Hives shall be placed in positions approved by the manager.

(2) A full and complete record shall be kept (in book supplied for the purpose) of all manipulations of the hives and bees.

(3) One-half of all honey produced shall belong to the hirer, and the other half and all wax and increase of bees shall belong to the owner, Anyone who secures a natural swarm will be rewarded according to circumstances.

(4) The owner reserves the right to change the hive, frames, or sections, at his discretion, and to remove the hive, bees, and accessories entire at the end of the honey-harvest, or at any time if the bees are affected by disease or not properly protected.

(5) In the event of the hirer desiring the removal of a hive, he shall consult the convenience of the manager as to time, and have regard to the season and the state of the weather."

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

THE BEST BEE.

[5972.] At times it is asserted that Ligurians or Italians are the *universal* bee, or, as some phrase it "the all-purposes' bee," and that all other races must take a second place, or even a back-seat far down. Such assertions are made oblivious of the fact that the race which I will simply name *Blacks* are almost the sole bees in all the northern nations of Europe; practically so in Germany, Austria, Russia, and generally in Middle Europe. They are also the preponderating race in the British Isles, France, and even Spain; that many of our colonies still cling to them; and that a large proportion of Canadian bees, as well as those of a great part of the United States, are Blacks, or have Black blood in their veins, while many large apiarists even there claim still that they are the best bees.

The prolificness of the best Italian queens, and several good points the race undoubtedly possess, boomed them, until in certain quarters queen-breeders monopolised this bee and boycotted the native race. Certain bee-newspapers, sometimes interested in the high prices obtained for the strangers, decried the old ones, made them unfashionable, and did their best to extirpate them, mainly, in my opinion, on false pretences. Queen-breeders, keen on the larger profits sang the praises of the new beauties. The eye, pleased with this taking trait, aided the movement by shoving on the impulse until these two points of beauty and prolificness—both in a measure patent—carried the day, acting to the detriment of the hardy, energetic, indefatigable and industrious busy Black bee.

Nothing is further from my thoughts than to bring railing accusations against either Italians or Carniolans. This much I will say in their favour, that I can imagine the possibility of adopting either of these races under given circumstances. Each have certain traits, peculiar to themselves, that might make them the better bee for the special occasion. Apart, from these, however, the Black has certain inherent good points which will perpetuate the race, and make them, over a large part of the world's area, *the bee* to trust to. The whole "bastard crew" which has sprung up has done much to make bee-keeping a terror and earn for pure Blacks a name for ill-temper which they do not deserve.

As concisely as I can, I should like to enumerate the virtues of this class of bees:—(1.) They suit our climate better than any foreign race known to me. (2.) They are admirably adapted for the production of comb-honey in its fairest and most palatable form. (3.) They are therefore the bees to pay when working for this form, as their produce sells best. (4.) They are excellent comb-builders, either in supers or brood-body. (5.) They start brood-raising at an earlier date than foreigners. (6.) Keep it up later in autumn. (7.) Take readier to supers. (8.) Stay there later in the season. (9.) Produce more heat than a like number of other races. (10.) Can breed early with a smaller force of bees. (11.) Store surplus with a smaller force. (12.) Send more foragers abroad out of every thousand bees. (13.) If not quite so prolific as some foreign races their energy and keen vitality enable them to keep abreast of the larger force. (14.) Young queens very rarely fail to mate. (15.) Scarcely ever are they found queenless in early May. (16.) They winter very much better. (17.) They dwindle less in the spring. All these are not mere theoretical assumptions, but are the fruits of years of observation and experience. That Blacks cannot work on flowers accessible to Carniolans or Ligurians is a mere chimerical conceit. That they are unable to ward off foul brood as well as these races is a delusion of the imagination. That Blacks, properly handled, are more vicious, taking a general average, is a foolish fallacy

which more intimacy with bees and their ways would explode as effectively as many another empty bubble. The Italian is an excellent bee in many ways. The Carniolan, if better understood and more intelligently manipulated, is on several points one of the best. But with all their virtues I could name more faults, patent and undeniable, than I can find in the Black Bee. The conclusion I arrive at is that with many merits, all the three have some demerits, and of them the Blacks have least.

We have heard so much in dispraise of Carniolans that it is refreshing to produce something in their praise. We all know they are noted for their prolificness and gentleness, but Mr. Benton, a very high authority, credits them with other two virtues—hardiness and industry, while he further commends them for their "highest grade snow-white comb honey." Italians may be the better bee, with him the Carniolan is the best. Mr. Simmins' latest verdict (not so very favourable as his first) is that "scarcely a fault can be found with them." He, too, comments on the perfection of their comb-honey. This should be a strong point in their favour. Perhaps their one great fault—their propensity to immoderate swarming—can be eradicated under modern methods..

I have already pointed out that here Ligurians have a strange habit of deposing their queen, after one or two seasons, in early spring at a time when there is no chance of replacing her. Back copies of the Journal will show this is a too common occurrence. I should like to learn if it is anything like general, or confined to the North D. M. M., Banff.

BEES IN YORKSHIRE.

[5973.] I have pleasure in sending you my experiences this season with the bees, because I think they will be of interest to your readers; and I myself would like to know if you consider the yield of honey a good one. I started the season with seven strong stocks, which I had built up and fed well during the early spring. From what I had seen advised in your paper and the "Guide Book" I decided to try and prevent swarming. To do this I put on shallow-frames about the latter end of May, which had been worked out last season. The bees soon took to these, and on May 30 I found the frames were being nicely filled, though very slowly, owing to the spell of cold weather which set in just at that time. On June 21 I took off two shallow-frames filled with honey, and on June 26 six more, which I at once extracted and placed back in the hives for refilling. This plan I have followed continually during the season, thus always keeping the bees at work. In my opinion this has greatly prevented swarming, as I have not had a single swarm issue from any one of the seven hives. Up to the present time I have taken off nearly 300 lb. of splendid white clover honey, and have left plenty for the bees during the winter. I have been a bee-keeper now for about six years, and so I may claim to have a certain amount of experience. This, however, is certainly my best season; but I should like your opinion on it. Being a schoolmaster, I regularly give my pupils lessons on the bees and their ways, and they are quite interested in my manipulations. They have also gained a certain amount of confidence, and are by no means terrified when a "bee" comes near them; and some of them have induced their parents to commence bee-keeping in a small way. Will you kindly give me the name and address of the secretary for York Bee-keepers' Association. I enclose my name and address. —J. P., Easingwold, August 3.

[The Hon. Sec. of Yorks B.K.A. is Mr. R. A. Grimshaw, 3, Manston Terrace, Crossgates, Leeds, but there are other associations—viz., York and District, East Riding and District, and Goole and District.—EDS.]

BEE-KEEPING AS A BUSINESS.

[5974.] In your reply to a "Would-be Bee-keeper," in B.B.J. of July 20 (page 286), you mention a letter marked "private and confidential," and quote from another B.B.J. reader who says that he is "always delighted to give any one interested in bees the benefit fo his experience.

I would like to be put into touch with one or both of the writers referred to, as I am thinking of going more largely into the business. Although I entertain no delusions in regard to it (having had bees for twenty years and been a reader of the B.B.J. for that time), and I am aware of the necessity of having a second string to the bow. still, I have no doubt of there being money in it as a help to something else. I think I could profit by the advice of the writers of the letters mentioned above, and if you will kindly put me into communication with them, I will be much obliged to you, and will promise not to bother them too much. I would like to know from some good authority (a man who has proved it by experience) what might be the result of intelligent application during a series of years, taking the average, and as the result of one man's labour. I know what can be done by a few hives in good seasons, but that is not the point. Name enclosed for reference.—D. P. J., Cumberland.

[We will draw the attention of both cor-

respondents mentioned to your communication, and have no doubt they will either write you under cover to our office or send particulars for publication in the interest of bee-keepers generally.—EDS.]

THE SEASON IN SURREY.

[5975.] The first 20 lb. of surplus honey I extracted this year was of straw-colour, but the last lot, of which I enclose sample, was taken about a fortnight ago, and is of a dark-green shade, but very good in flavour. I find that friends object to the colour, and look on it with suspicion. I learn, however, from neighbouring bee-keepers that this is the usual colour of honey taken in our part of the country, and so ask: 1. Can you tell me the cause? I may say my bees have done remarkably well this season, having already yielded me 126 lb. from three hives, while there is a great deal of uncapped honey left in the combs; not only so, but we have yet the heather crop to come. I only started bee-keeping last year with one stock which swarmed twice. This year I prevented swarming by constantly cutting out queen-cells during June.—G. L. P., Ockley, Surrey.

[The greenish shade frequently seen in honey gathered in July, as in your sample, generally comes from the limes. It is of good quality, the chief characteristic being a slight "minty" flavour.—EDS.]

BEE ENEMIES IN SOUTH AFRICA.

[5976.] As a constant reader of the B.B.J., I take the liberty to ask your advice in the following matter.

I have lately started an apiary on the farm Scheerpoort, in the district of Pretoria, Transvaal, and am going on nicely, having already fifty colonies in "W.B.C." hives. But now I am very much troubled by birds, which are called here the "mountain swallow."

These birds are notorious bee-catchers. They come from the banks of the river in great numbers, and catch nearly every bee that comes out of the hive. So I think my colonies will never become populous. I therefore ask: Can you tell me what to do to get rid of them—J. W. H. KELTING, Scheerpoort, District of Pretoria, Transvaal, July 22.

[While unable, of our personal knowledge, to name any plan of dealing with the bee-pest you name, we have a fair number of readers in South Africa, and it is more than probable that some one of them may be able and willing to render help in coping with the trouble, by writing you direct or sending us a line for publication. In any case, we will draw the attention of our friend, Mr. J. Martin, Bog Farm, Walmer, Port Elizabeth, South Africa, to your complaint. He knows something of bee-enemies in that part of the world, and as an expert of the B.B.K.A. will no doubt be as able as most people to deal with the "mountain swallow."—EDS.]

ITALIAN QUEEN IN BLACK COLONY.

[5977.] I am much obliged for your answer to my query (3850, page 316), but it only increases the mystery. There can be no doubt that the hive from which I took the young queen sent contains only black bees. I have seen no trace of Italian or even hybrid workers. As you pronounce the queen to be an Italian, I can only suppose that she must be a queen that I tried to introduce into another hive about six feet off, but owing to mismanagement she flew away as I was putting her into a cage. She must have flown into this hive, and for some unexplained reason was accepted by the inmates. If this explanation is not the real one, I can only believe that the queen I sent to you was a "sport," a fact that I admit is hardly credible. Perhaps such an occurrence is sufficiently remarkable to interest readers of the B.B.J.—August 11. M. D. H., Windsor.

[We think the explanation given above clearly accounts for the Italian queen in the black stock. There are no such things as yellow queens bred from black mothers mated with black drones.—EDS.]

PRICE OF HONEY.

[5978.] In reply to "Countryman" (page 306), I have as yet sold only a small portion of my own crop, for which I have got my own price, and with only a few cwts. yet to dispose of, I am unable to give him any practical help, but have, however, no fear of finding a market when I set out to seek one.

Not being dependent on my bees, there is all the greater reason why I should hold out for a good price, and it would, to my mind, be wrong to offer at a low price, and thus seriously injure those who depend on bees for a livelihood. For the same reason it is not advisable for anyone to offer suggestions as to sale of honey and so help to cause the market to be flooded. Those who cannot find a market for themselves had better sell to a honey merchant at a low price, rather than to the retailers at a low figure. My motto is, "Live and let live." I regret that some bee-keepers have so little scruple in underselling others. My former market has been lost through their action, as I have refused to follow their example.—BUSINESS, Cornwall.

BEES NOT FILLING SECTIONS.

[5979.] It may interest your correspondent "Anxious," who writes in B.B.J. of July 20 (Query No. 3820), and other readers who have obtained no surplus-honey this year, if I say that I experienced the same difficulty in inducing bees to enter sections. A rack was placed on top of a fairly strong stock for four or five weeks without any result whatever. On July 8, however, I replaced the section-rack with a crate of shallow-frames fitted with new foundation, and the bees not only took to this immediately, but have very rapidly drawn out all the combs, and are going on as satisfactorily as I could wish in honey-storing.—APIS, Birmingham.

HEATHER NEAR SALISBURY.

[5980.] In reply to your correspondent "Ubique" (3853, page 317), asking for nearest heather to Salisbury, he would have to send his hives eight or ten miles from here into the New Forest in order to get to the heather. If "Ubique" would write or call on me I should be pleased to give him any information and help I am able, as I like to get in touch with all bee-keepers, especially in this district, and I particularly would like to know of any case of foul brood, so I may guard against it. I have never seen it yet. I send full name and address for use if needed.—J. B., Castle Road, Salisbury, August 10.

[We will forward letter if addressed to this office.—EDS.]

NOTES ON MY FIRST BEE-SEASON.

[5981.] Can you tell me why my bee-keeping is not a success? I am quite a beginner, having purchased two stocks in "W. B. C." hives from a neighbour in February last. I also bought Cowan's "Guide Book, and became a reader of B.B.J. and RECORD. Finding very little food in the hives, I gave each a cake of candy, and renewed same as required until April, after which I gave syrup-food. All seemed to go on well, and I gave each stock a clean hive during the fine weather in May. It has been a good season for bee-forage, there being plenty of blossom on fruit trees, hawthorn, and sycamore, together with an abundance of white clover; even at the present time the fields are spotted over with it. But in spite of all this promise of honey the hives have not swarmed, or attempted to do so. On June 3 I gave each colony a rack of shallow-frames fitted with full sheets of drone-base foundation, as sample, and up to now they have not begun to draw any of it out.

One hive is very strong in bees, the brood-chamber being crowded with them, and a large number are walking listlessly about on the foundation in the shallow-frames. I noticed large patches of sealed brood on nine frames with honey along top edges and sides of same; the tenth frame is filled with honey, about half of it sealed. In order to coax the bees up I tried cutting out a small patch of brood and pinning it in the super, in addition to contracting the brood-chamber to eight frames, as advised on page 57 of "Guide Book." I also brushed the bees off the two frames into the super at the same time, and cutting a standard frame of honey down to shallow-frame size, and placed some in the super, but still without success; in fact, the bees appear to be carrying the honey down into the brood-chamber rather than adding to it. The other stock is a poor one, after all the care and feeding.

After giving above details of what has been done, I conclude by asking if you will kindly reply to the following questions: 1. Is it a case of hives needing to be requeened? 2. Is my failure due to not having some drawn-out combs on hand ready for use? 3. Could I get some combs drawn out by any means this season for use next? 4. What kind of bees are the enclosed; I send one from each hive? 5. Is foundation all right? 6. There is heather $2\frac{1}{2}$ miles away; is that beyond the reach of my bees?—I send name, etc., for reference, and sign—NOVICE, Bolton-le-Moors.

[Your want of success is no doubt attributable to one of two things—i.e., the queen and bees at fault, or else the bee-forage of your district has failed to give the bees a chance to show what they could do. 1. It might be well to inquire how neighbouring bee-keepers have fared, because the failure cannot in your case be set down to either carelessness or mismanagement. 2. Drawn-out combs would no doubt have helped in rapid-storing if honey was to be had in the fields, but no more than this. 3. Only by purchase. 4. The two bees were smashed beyond recognition in post. 5. We cannot see anything wrong with foundation sent. 6. Very little, if any, advantage in honey-gathering will be got from heather so far as $2\frac{1}{2}$ miles off.—EDS.]

PASSING NOTES AND COMMENTS.

[5982.] Referring to the articles by Mr. D. M. Macdonald on "American and Colonial Papers," I am much interested in the paragraph on "Strengthening Weaklings" (page 255 of B.B.J. for June 20), but I am impelled to ask: What about the separation? how is that managed?

In the same issue of your paper there is a

query (3794, page 257) on "Ridding hives of Ants." I tie a little greasy cloth around each leg of the hive stand, and have no trouble with ants.

Again, in B.B.J. of July 6 (page 266) there is a letter on "The Carbolised Cloth at Fault." I use "Little's Phenyle Disinfectant" (non-poisonous) on my hands and pacifying cloths, and ask for nothing better.—W. C. H., South Devon.

Queries and Replies.

[3858.] *Moist Sugar for Bee-food.*—Can you kindly help me with your advice? Having hived a dozen driven colonies last week, I wired to Hull for 1 cwt. "*brown* pure cane sugar" for syrup. I was too late in discovering that I had made a mistake, as you advise *white*, from which I have always made excellent syrup. I made one boil of this brown (soft cane-sugar), giving 7 pints of water to 10 lb. of sugar, and the syrup came out very thin and watery. I then made another boil, allowing only 5 pints of water, and the result was much better. What would you advise? I have to thank you for your excellent advice last spring re excessive swarming. I followed your directions, and one of my two hives never swarmed this season, with the result that I took off from it a crate of shallow-frames and four racks of sections. This one, however, had a Taylor swarm-preventing chamber under it. Reply will oblige—P. A., Scarborough.

Reply.—Unrefined moist sugar—even if pure cane — is not suitable for syrup-making. Only the refined white crystals should be used; in fact, many bee-keepers use loaf sugar only. In your case the syrup made as per second boiling will do no serious harm, as the bees will not feel any evil effects so long as present weather lasts and bees can build comb from it. The trouble with unrefined sugar arises in winter, when, owing to its containing the molasses—found in all raw sugars—it is apt to cause dysentery, owing to the bees being unable to fly abroad for cleansing flights in winter.

[3859.] *Protecting Store-combs from Moths and Other Queries.*—1. What is the best method for storing shallow-frame combs as to be free from moth getting in? I have covered them over in the box and pasted, so as to close up every avenue, yet moth gets in. Would you leave the combs open, and in a loft of a stable during winter? 2. Would you stimulate by gentle feeding in autumn strong stocks even though they have plenty of food, so as to get young brood hatched out? 3. What do you suggest to keep them from fixing down the shallow-frame box to top of hive? They fix the box, and, what is worse, some of he frames to lower frames.—Forester, Glos.

Reply. — 1. A full description of a method of protecting store-combs appeared in B.B.J., Vol. 28 (page 333), and will be found effective. It is too long for insertion here, but the number can be had for 1½d. in stamps. 2. Many bee-keepers practice stimulating in autumn to rear young bees for next year's work. 3. Vaseline rubbed on lower edges of super-boxes will prevent propolisation.

[3860.] *Bees Found in Garden Ground.*—In digging my garden I found a hive of bees in the ground, and, through watching them, I have become interested in bees. I have, in consequence, commenced to take in the B.B.J., and would esteem it a favour if you will say:—1. Can I get the bees into a hive? and 2. Please give me the name of a reliable guide-book to bee-keeping, such as the uninitiated could readily understand. Name enclosed for reference. —C., Birmingham.

Reply.—1. We fear you have made a mistake in supposing that the bees found in the ground are hive bees. Send on a specimen of the bees (in a pill-box for security in post), and we will tell you if our idea is not right. 2. The "Guide Book" to be had from this office (see advt. in B.B.J.) will fill all your requirements.

[3861.] *Effects of Bee-stings.*—After being stung by bees a great number of times, has the poison any injurious effect on the system beyond the pain and swelling at the time of being stung? In other words, would the acid in the blood have any effect for any time afterwards, or cause illuess? I enclose name, etc., and sign—Bee-stings, Herefordshire, August 1.

Reply.—No injurious effect whatever will result after one becomes accustomed to stings for a year or less. On the contrary, it is a fairly well-established fact that bee-stings are beneficial in cases of persons suffering from rheumatism.

[3862.] *Transferring Swarms to Frame-Hive.*—I have just been away for three weeks' holiday; during my absence my bees swarmed four times. My brother, who knows nothing about handling bees, very smartly captured each swarm in a separate basket and left them so till my return. On July 26, on my return, I found one basket full of comb and a strong swarm. I united this with another "basket load," and the old stock together by driving shaking all into a sheet, spraying with peppermint, removing two queens, and finally running into hive. I broke out combs from small swarm with brood, fixed them in a standard frame and put into hives; set on excluder and put the

basket which had contained the strong swarm, now filled with comb and full of brood, on top of all, spraying everything with peppermint. The bees settled down all right, but two or three days ago I found a number of larvæ and young dead bees, as per enclosed samples, cast out. Can you tell me the cause, and can I stop the deaths in any way? The hive seems well supplied with pollen and honey and the bees are working well.—NOVICE, Brondesbury, N.W., August 7.

REPLY.—The dead immature bees cast out are merely a few that have got chilled to death during the operations mentioned. No harm will follow in consequence.

[3863.] *Returning Shallow-frames after Extracting. — Bees Fighting among Themselves.*—I extracted yesterday twelve shallow-frames full of honey from one hive, and then replaced the wet combs for the bees to clean out. I did this about 3 p.m., and an hour afterwards on going into the garden, I found the bees in a very excited state and fighting among themselves. Not being able to do anything to restore order, I left them till next morning, when, on looking into the shallow-frame box, I found it crowded with bees, but a lot of dead ones were lying at the bottom. Is this not an uncommon thing when replacing combs to be cleaned, or what did I do wrong? Your reply in B.B.J. will be appreciated by—NOVICE, Maidstone, August 9.

REPLY.—We rather think the trouble arose from your not deferring the time of returning wet-combs till *after sundown*, as has been frequently recommended in our pages. Failing to do this has probably caused a few bees from other hives to start robbing, and finally some quarrelling among the bees belonging to the hive in question.

[3864.] *Transferring Bees from Skeps.*—I have three stocks of bees in flat-topped straw skeps with a hole in the crown. The supers were put on some weeks ago and are almost filled up with honey, and I am now anxious to put the bees in frame-hives. I should, therefore, feel obliged if you would kindly let me know through the B.B.J. how and when can this be done.—W. EDWARDS, Bagillt, N. Wales.

REPLY.—After removing the supers, see that the skeps are well provided with food at end of season, and winter the bees in their present hives. Next spring let the bees transfer themselves to frame-hives on the plan fully-described in "Guide Book" (page 140).

[3865.] *Extractors for General Use of Associations.*—We bee-keepers in this village all used an association extractor that was sent to us from another village. The man who used it there did not know he had foul brood in his apiary; but had it badly. We all have foul brood now, and apparently began to have this after using the extractor. We all destroyed several stocks in the spring, and think there will be others to destroy this autumn. I have two that were slightly affected in the spring; if they have not recovered by use of the remedies I applied, I shall destroy them. Also it looks as if three other stocks that ought to be strong are gradually weakening. Foul brood has been a serious loss to me this year — three stocks destroyed, two others known to be affected, and probably several others will be found so soon, when I examine at end of season. I will, therefore, be glad if you will tell me how to effectually disinfect an extractor before and after use. The smell of phenyle lasts too long for this remedy to be suitable before using; also it leaves a greasiness on tin which is a little difficult to remove. Reply will oblige. Name sent for reference.—B.

REPLY.—It should be insisted on by all county associations who lend extractors to their members, that the machine should be thoroughly washed out with hot water before returning it. Without this precaution, the risk of spreading disease will always remain. No disinfectant for use in cleaning extractors is so suitable as the "soluble phenyle" mentioned on page 168 of "Guide Book" (recipe No. 9), as it is practically odourless.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 19, at Chorley.—Show of Honey, etc., of the Lancs. B.K.A. in connection with the Lancashire Agricultural Society. **Entries closed.**

August 19, at Borgue, Kirkcudbright, N.B.—Annual Show of Flowers, Honey, etc. Open Classes for Honey. Apply to Mr. Munro, The Academy, Borgue, Kirkcudbright, N.B. **Entries closed.**

August 19, at Burry Port.—Honey Show in connection with the Burry Port Horticultural Society, South Wales. **Entries closed.**

August 23, at Bradford Abbas, Dorset.—Annual show of the Yetminster and District B.K.A. at St. Mary Head. **Entries closed.**

August 23, at Lancaster. — Show of Honey, etc., in connection with the Lancaster Agricultural Society's Annual Show. **Entries closed.**

August 23 and 24, at Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Horticultural Society's Great Floral Fête in "The Quarry," Shrewsbury. **Entries closed.**

August 26, at Barnton.—Honey Show, in connection with the Barnton Floral and Horticultural Society. Two classes open to the county and all members of the C.B.K.A. Six local classes. The Cheshire B.K.A. will present their silver medal to the winner of first prize in Open Class for twelve jars light honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 19.**

August 29, at Cartmel, Lancashire.—Honey Show, in connection with the Thirty-third Annual Show of the Cartmel Agricultural Society.

Three Open Classes for Comb and Extracted Honey (prizes 15s., 10s., 5s., and 2s. 6d.) and Beeswax (prizes 10s. and 5s.), along with silver and bronze medals of the Lancashire B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 17.**

August 30, at Reading.—Honey Show of the Berks B.K.A., at Forbury Gardens. Schedules on application to D. W. Bishop Ackerman, Hon. Sec., 161, King's Road, Reading. **Entries close August 26.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of C.B.K.A. **Entries closed.**

August 30 and 31, at Osmaston Park, Derby.—Derbyshire B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances. Fifteen classes (four open). For entry forms apply R. Coltman, 49, Station Street, Burton-on-Trent. **Entries close August 26.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. One class open to Cheshire. Three to district. Two to cottagers in district. C.B.K.A. medal offered. Schedules from Wm. Page, Lower Peover Knutsford. **Entries close August 23.**

September 2, at Bramhall, in the grounds of Bramhall Hall.—Bramhall and Woodford 16th Annual Show. Three open classes for honey and wax; four to district; C.B.K.A. medal offered. Prizes 15s., 10s., 7s. 6d., 5s., 3s., 2s. Schedules from John Sibson, Hon. Sec., Hawthorn Grove, Bramhall, Stockport.

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes, Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 13, 14, and 15, in Waverley Market, Edinburgh, along with Great International Flower Show. Four open classes for Sixes, Sections, and Bottles of Flower and Heather respectively, with prizes of 15s., 10s., 5s., and 2s. 6d., for an entry fee of 2s. each class. Schedules now ready from W Weir, Secretary, Heriot, Midlothian.

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

October 3 to 5, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

*** Our attention has been drawn to a printer's error in reply to query, No. 3,839 (page 307). Absence from town on "press-day" prevented us from noticing it at the time, and we therefore gladly—with thanks to "E. A. Y." and "Forester"—reprint the reply, corrected, as follows:—"2. We always use queen excluders below shallow-frames, but, in your case, should remove those you have on without delay."

*** Visiting Apiaries.—Referring to the request of "L. C. B., Teddington" (page 320 of last week's B.B.J.) we have received the following kindly offer:—"The Apiary, Pirbright, Surrey, August 11, 1905.—To 'L.C.B.,'—If you care to run down any Saturday or Sunday, I shall be pleased to show you my bees. I have seventeen stocks, and no doubt they would interest you. The nearest station is Brookwood, L. and S. W. Railway, and my place is one and a half miles from there. When you get to the station ask at the post-office or butcher's and they will be able to direct you, or, if you ask for Mr. Cherryman's farm, we are next door to him. Drop me a line if you decide to come.—Yours, sincerely, G. T. WALDEN."

W. J. F. writes to say, in reply to an inquiry on page 319: "Please inform "E. G." that East Grinstead is a good bee-district."

D. H. LANGSTON (Hammersmith).—Dispensing with Bee-smoker.—Whatever your friend, the market gardener, may say, we advise you not to attempt inspecting hives without using either smoke or some other bee intimidant that will pacify the bees.

GEORGE MAY (Surrey).—Removing Honey from Spiteful Bees.—If the bees are so vicious as stated, and you are afraid of going near them, it will be advisable to get the help of some neighbouring bee-keeper, if possible. Otherwise you should use a bee-smoker and try the effect of a little tobacco sprinkled among the material used in same. There is no certain preventive of stings that will protect a novice in handling bees from possible harm.

E. W. H. (Bowdon).—Queens "Piping" all Season.—1. It is perfectly true that

queen "piping" only takes place after the mother-bee has left the hive with a swarm, and is a safe indication that a second swarm will issue within a day or two. Anything outside this rule is exceptional and abnormal. We have known not a few cases where the squeaking noise made by a bee, when imprisoned beneath a quilt, has been mistaken for queen "piping." May this not be so in your case? 2. There have been many complaints of difficulty in getting bees to enter supers this season, but they have come from bee-keepers of limited experience, none having reached us from old hands. 3. The "Chapman Honey Plant," to bloom well, should be sown in July or August to bloom the following year, after being pricked out of the seed-bed in spring.

T. L. (Wakefield).—Dark Honey for Feeding Bees.—The discoloured honey is quite suitable for bee-food. After liquefying, by immersing jars in warm water, thin the honey down with hot water to consistency of ordinary bee-syrup and give in usual way.

H. Bevan (Sidcup). — Old Fashioned Apiaries.—Much obliged for photo, but you will find an excellent illustration from photo of such an apiary on page 4 of "Guide Book."

R. G. H. (Darlington).—We cannot name a better guide for judging honey than the paper on the subject read by Colonel Walker, and published in B.B.J. of March 31 last year.

Queen Bee (Mendham, Norfolk).—Joining County B.K. Association.—There is no B.K.A. for South Norfolk, or for South Suffolk. You had better apply—for expert help—to the secretary, North Norfolk B.K.A., Mr. C. J. Cooke, Melton Constable, or to Mr. G. Alder, secretary, Essex and Suffolk B.K.A., Raworth.

A Sussex Novice (Worthing).—Clearing Bees from Straw Supers. — The super must be raised very slightly and a puff or two of smoke given at openings so made. Next pass a wire under raised edge and draw it gently through to sever any brace-combs—if there are such—attached to lower skep; then lift off super and drive bees into an empty skep in the ordinary way and throw them out in front of parent skep. Evening is the best time to operate.

(Rev.) S. H. M. (Tonbridge). — Adding Supers.—After July closes, it is useless to give more super-room in the south. We regret unavoidable delay in reply.

F. H. (Herts).—1. Bee-flowers.—No. 1. Erica or Calluna vulgaris, or common ling. No. 2. "Chapman honey-plant" (Echinops sphærocephalus). No. 3. Meadow sage (Salvia pratensis). All three are honey plants of varying merit. 2. The dead queen sent is a slightly-marked native. The age of queens can only be judged approximately by the appearance of the insect.

Honey Samples.

F. C. W. (Harrogate).—Sample is from mixed sources; it is fair in colour and flavour, but hardly up to show-bench standard, being too thin to stand much chance of winning.

Ambition (Kircudbright). — All three samples are very good, but we differ from your "placing." Our choice is No. 2 first, No. 1 second, and No. 3 third.

H. O. (Cardiff).—Your sample is very good honey, but has no distinctive flavour to enable us to define its source. It has a greenish tinge in the 2-oz. jar and may look different in larger bulk.

F. A. (Knutsford). — If carefully freed fro mthe air-bubbles seen, your sample is good enough for any show-bench. It is mainly from white clover.

J. H. B. (Broughton).—1. Your honey is of very good quality. 2. The bloom No. 1 is from alsike, or hybrid clover. Nos. 2 and 3 are varieties of the ordinary red clover.

Rex (St. Leonards-on-Sea). — With less than a half-ounce of honey mixed up with broken cappings, it is impossible to judge it properly from any point except density. Nor can we define its source, but the flavour is by no means good. We may say, however, that very thick honey requires to be carefully uncapped with a sharp knife without breaking the cell-walls, otherwise it is most difficult to extract.

J. M. B. (Brigham).—Your honey is very good indeed, and quite suitable for showing.

Jumbo (Knutsford). — Samples are too small for judging accurately. No. 2 seems best, and is quite suitable for a local show. Nos. 1 and 3 are also fairly good.

Suspected Combs.

(Rev.) J. R. W. (Lincs.). — The single sealed-cell in bit of comb sent contained only the decaying remains of a drone larva.

Midlothian (N. B.).—A case of decided foul brood.

An Inquirer (Bridge of Allan).—The three sealed-cells in bit of comb sent contain only chilled brood, there being no sign of foul brood about comb.

A. Lee (Co. Durham). — Comb sent is affected with foul brood. If stock is weak the bees and combs should be destroyed.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

THE CLOSING SHOW SEASON.

Our list of "shows to come" is now rapidly diminishing in length, and, with regard to those which remain, intending exhibitors will do well to write for a schedule at once, ere it is too late to make an entry.

Apart from the shows immediately connected with county associations, there are the important exhibitions of Honey and Bee-produce to be held in the Agricultural Hall, London, the first of which (the "Confectioners'") opens on September 2 and closes on the 9th. The second (the "Grocers'") takes place a week later, viz., September 16 to 23. Full particulars of both exhibitions appear in the advertisement on another page, from which it will be seen that, in order to encourage entries from bee-keepers of all classes to compete, the fee has been fixed at one shilling, along with other inducements.

Following the exhibitions named above we have the Dairy Show in the same hall on October 3 to 5, entries closing on September 4; while of county shows, dates of which are still open, we are requested to notify that the closing of entries for the Derbyshire B.K.A. Show on August 30 and 31 cannot be extended beyond Saturday next, the 26th inst. For the Surrey B.K.A. Show, at the Crystal Palace, September 14 to 16, entries are available till September 1. Remaining open dates are as per list.

LEICESTERSHIRE B.K.A.

ANNUAL SHOW.

The annual show of the above association was held in connection with the twentieth annual flower show at the Abbey Park, Leicester, on August 8 and 9. There was a large show of honey, the quality being excellent, owing to the exceptionally good season this year. Very little dark honey was on view. The number of entries was a record one, and the judges, Messrs. Peter Scattergood (Notts) and H. M. Riley (Leicester) had a difficult task in making the awards. Lectures and demonstrations were given in the bee-tent and proved very attractive, Mr. W. W. Falkner acting as manipulator.

AWARDS.

Observatory Hive, with Queen and Bees.—1st, T. H. Geary, Leicester; 2nd, A. Beadsmore, Woodhouse.

Twelve 1-lb. Sections.—1st and Sil. medal, J. Waterfield, Kibworth; 2nd, H. Willey, Gilmorton; 3rd, J. Pickersgill, Withcote.

Twelve 1-lb. Jars (Light) Extracted Honey (North Leicester only). — 1st, W. P. Meadows, Syston; 2nd, J. W. Drake, Lutterworth; 3rd, J. W. Smith, Ashby Folville; 4th, S. Spray, Melton Mowbray.

Twelve 1-lb. Jars (Light) Extracted Honey (South Leicester only).—1st, H. Dilworth, Shangton; 2nd, A. Ward, Great Bowden; 3rd, J. S. Shenton, Husbands Bosworth; 4th, E. A. Jesson, North Kibworth.

Twelve 1-lb. Jars (Dark) Extracted Honey.—1st, J. Waterfield; 2nd, E. A. Jesson; 3rd, W. W. Walker, Market Harborough.

Three Shallow Frames of Comb Honey.—1st, E. A. Jesson; 2nd, T. H. Geary; 3rd, J. Waterfield.

Display of Honey.—1st, J. Waterfield; 2nd, T. H. Geary.

Six 1-lb. Jars (Dark) Extracted Honey (novices).—1st, Mrs. Bott, Market Harborough; 2nd, Mrs. Meadows, Market Harborough.

Six 1-lb. Sections (novices).—1st, J. H. Loseby, Market Bosworth; 2nd, C. Botterill, Kimcote.

Six 1-lb. Jars (Light) Extracted Honey (novices).—1st, G. W. Haines, Huncote; 2nd, H. Hopkins, Enderby.

Honey Beverage.—1st, Mrs. J. Waterfield; 2nd, T. H. Geary.

Beeswax.—1st, J. Waterfield; 2nd, A. Smith, Walton Grange.

Honey-Cake. — 1st, Mrs. Waterfield; 2nd, Mrs. Falkner, Market Harborough.

J. WATERFIELD, Hon. Sec.

STAFFORDSHIRE B.K.A.

ANNUAL SHOW AT WALSALL.

The annual show of the Staffs B.K.A. was held in connection with the Staffordshire Agricultural Society's exhibition at Walsall on July 19. There was a good display of honey, etc., the Judge being Mr. F. W. Jones, of Etwall, Derby, who made the following awards:—

Honey Trophy.—1st, G. W. Buttery, Wheaton Aston; 2, H. G. Barlow, Lower Hartshill; 3, H. Fieldhouse, Standon Bridge.

12-lb. Sections. — G. W. Buttery; 2nd, G. Evans, Bromstead; 3rd, Miss F. S. Smith, Lichfield; 4th, E. White, Market Drayton; v.h.c., F. F. Upton, Rugeley.

12-lb. Jars Extracted Honey. — 1st, W. Thomas, Rugeley; 2nd, H. C. Barlow; 3rd, G. W. Buttery; 4th, Miss F. E. Smith.

12-lb. Jars (Dark) Extracted Honey.—1st, H.C. Barlow; 2nd, F. F. Upton.

6 1-lb. Jars Granulated Honey.—1st, W. Tildesley, Stone; 2nd, H. C. Barlow; 3rd and res., G. W. Buttery; c., F. F. Upton.

Three Frames of Comb Honey, for Extracting.—1st, H. C. Barlow; 2, W. Tildesley; 3rd, G. W. Buttery.

Observatory Hive with Bees and Queen.—1st, H. C. Barlow; 2nd, H. Fieldhouse.

Beeswax (not less than 3 lb.).—1st, F. F. Upton; 2nd, T. Taylor, Pattingham

Twelve 1-lb. Sections.—1st, G. Evans; 2nd, H. Fieldhouse.

Twelve 1-lb. Jars Extracted Honey.—1st, G. Evans; 2nd, H. Fieldhouse; 3rd, D. Whitehouse, Walsall; h.c., Miss K. M. Ellis, Hamstead.

Twelve 1-lb. Jars Extracted Honey (open to Stafford only).—1st, H. Fieldhouse; 2nd, W. Thomas; 3rd, H. C. Barlow; v.h.c., Miss L. Lowe, Tamworth.

Twelve 1-lb. Sections (Cottagers').—1st, G. Evans; 2, W. Tildesley; 3rd, Mrs. Barnett, Lichfield; c., H. Fieldhouse.

Twelve 1-lb. Jars Extracted Honey (Cottagers').—1st, W. Tildesley; 2nd, G. Evans; 3rd, H. Fieldhouse; v.h.c., W. Croome, Lichfield; h.c., G. H. Mytton, Lichfield; c., T. Taylor.

Six 1-lb. Jars Extracted Honey (Cottagers' Stafford only).—1st, W. Tildesley; 2nd, W. Croome, Weeford; 3rd, H. Fieldhouse; v.h.c., G. Evans.

2-lb. Sections (open).—1st, J. Pearman, Derby.

24-lb. Jars Extracted Honey.—1st, S. Cartwright, Shrewsbury; 2nd, T. S. Holdsworth, Lindsey; 3rd, J. Pearman; r., H. C. Barlow.

Collection of Hives and Appliances.—1st, H. Thorn and Co., Stafford.

WORCESTERSHIRE B.K.A.

ANNUAL SHOW.

The annual show of the association was held at Macclesfield on August 10, Dr. E. Walpole Simmons acting as judge. The entries were more numerous than for several years past, and the exhibits of excellent quality. Honeydew, so much dreaded by local bee-keepers, has been almost totally absent from the county this season. The following are the awards:—

Complete Frame-hive.—1st, G. Richings; 2nd, Jos. Price.

Twelve 1-lb. Sections.—1st (silver medal), W. E. Hyde; 2nd (bronze medal), C. H. Haynes; 3rd (certificate), Wm. Churchill.

Six 1-lb. Sections.—1st, W. E. Hyde; 2nd, G. Hardman; 3rd, J. Toombs.

Twelve 1-lb. Jars Extracted Honey. 1st, W. Fake; 2nd, Miss G. Willan; 3rd, C. H. Haynes.

Six 1-lb. Jars Extracted Honey. 1st, T. Rouse; 2nd, E. Corbett; 3rd, J. Toombs.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, C. H. Haynes; 2nd, Miss G. Willan; 3rd, A. R. Moreton.

Beeswax. 1st, G. Richings; 2nd, Miss G. Willan.

One Shallow-Frame of Comb Honey.—1st, E. A. Millward; 2nd, T. Rouse; 3rd, E. Corbett. JOHN P. PHILLIPS, Hon. Sec., W.B.K.A.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

BEE INSURANCE.

[5983.] Will you allow me to remind your readers that their insurances for the year 1905-6 are now due, the policy for 1904-5 having expired on August 1. All persons who are members of a county association should send to their secretary without delay, and all *non-members* to Mr. E. H. Young, secretary B.B.K.A., 12, Hanover Square, London. I am glad to be able again to report a satisfactory increase in the number of hives insured (it now exceeds 10,000), showing that our scheme meets a want and that the careful bee-keeper is taking advantage of it. I should gladly see the numbers doubled, and think they will be as the scheme becomes more widely known. The claims made have been considerately met, and two are now pending. It is well worth while to pay 1d. a hive a year and feel secure against claims for damage.—THOS. I. WESTON, Vice-chairman, B.B.K.A.

TALL VERSUS SQUARE SECTIONS.

[5984.] It is with a certain amount of diffidence that I write in favour of the "tall" section, after reading letters from such experienced and respected bee-keepers as "D. M. M." and Mr. Woodley against their use, compared with the 4¼in. square section. But, as no one else appears to have a word to say, I cannot let it go by without giving my first experience with them for what it is worth. In the hands of the professional honey-raiser, perhaps the square sections are good, but as they have been more or less a failure with me I venture to put forth my method of raising the finest sections I have ever had for the benefit of amateurs like myself. In the first place, I purchased some frames (with "fence-separators") holding three tall sections each. These work in ordinary shallow-frame supers. My supers hold eight wide shallow-frames, so I put in six frames containing sections and two wide empty combs on the outside. The hive treated thus gave me fifty-four tall sections and six wide shallow-frames full in the three supers, and have since filled another ordinary super of wide combs. The bees take to them better in this way.

You get less faulty or half-filled sections. They are cleaner and much neater when glazed, the comb being nearer the glass. To prove the quality of the sections referred to, they secured me 1st prize and silver medal at the county show. We have had a lovely bee-season here. I send name etc.—BUSY BEE, Staffs.

[Our correspondent has surely forgotten that the Rev. R. M. Lamb has been, and is, an able and warm advocate of the tall section, as his contributions to our pages on the subject show.—ED.]

ROBBING.

HOW I STOPPED IT.

[5985.] A few days ago, having noticed that one of my hives (No. 2) was attacked, I reduced the width of entrance to about a bee-space and put a piece of wire-gauze on the top of the super—to provide ventilation. I then brought the syringe and soapy water to bear on the crowd on the alighting-board; and it was soon seen that they (the bees) did not like it, and made off, but only to return almost immediately, and so it went on during the day. The next two days were wet (raining), which settled the peace of that hive. But presently I noticed the robbers had turned their attention to No. 4, which was promptly closed up and treated as above. It then occurred to me to try a dusting of "Overton's disinfecting powder" (as used in the drains) instead of the syringe, etc." Result, a surprise at the rapid retreat of the robbers. A slight dusting of the alighting-board with the powder for a day or two, and all was peace and order. I used a pepper castor as a dredger, which will be kept ready for the next outbreak. —W. C. H., South Devon, August 20.

OUR WILD BEES.

[5986.] I herewith enclose a specimen of a wild bee, which I shall be glad to have named, as I have very little knowledge of our wild bees. The nest was built in a hollow, beneath a frying-pan, being about eight inches in circumference, and covered in with short grass litter. The interior consisted of irregular wax cells, the nest being lined with a dark brown wax. The bees have died away, leaving larvæ green in colour encased in a portion of the roof, this part consisting of a material resembling wadding.

My idea is that it is the *Bombus muscorum*, or moss-bee, but being far from certain I will be glad if you will put me right.—T. E. WHITELAW, Pinkneys Green, Maidenhead, Berks.

[We forwarded the specimen to Mr. F. W. L. Sladen, who is well known as a skilled entomologist, and he kindly sends the following reply.—EDS.]

"The bee sent is, as supposed, the *Bombus muscorum* (Lin.) of old authors. As, however, it has been found, on investigation, that Linné's type specimen was probably of another species, the bee in question is now known to entomologists by the name of *B. agrorum* (Fab.), the name *muscorum* being, on the Continent, applied to the other species referred to.

The "green larvæ" mentioned are the caterpillars of the Humble-bee Wax-moth (*Aphomia sociella*), and they have evidently brought the little colony to an untimely end by consuming the comb and brood. The 'material resembling wadding,' in which it is stated that the larvæ are encased, is no doubt their web. These larvæ spin very tough cocoons in which they hibernate, and they change to chrysalids and then to the moths in the spring.—F. W. L. S."

THE SEASON IN KENT.

FOUR SWARMS UNITING OF THEMSELVES.

[5987.] My experience so far this season has been very satisfactory. The bees got through the winter very well, and the cleaning and painting of each hive took place, as usual with me every spring. Three hives are painted white, four light stone, and three dark stone; the three colours giving the whole a nice appearance.

I wanted to renew some comb in the brood-chamber of two stocks, and as both were strong lots with plenty of sealed brood, a new frame was placed in the centre of each at the end of March, and a second one a fortnight later. The result was most satisfactory, and, under favourable conditions, the early spreading of brood will always be seen to in my future practice.

The cold winds in May put a stop to swarming, but the bees made up for it in June when they perfectly revelled in it.

Additional stocks not being wanted, queen-cells were cut out and swarms returned. This arrangement, however, did not suit the bees, for it evidently interfered with their plans, for on June 20 I was watching them at 10 a.m., when a swarm issued from No. 2 and before all had clustered on a pear tree near by, No. 5 swarmed, and the two lots united; then, a few moments later, another swarm came out from No. 1 and joined them, and not content with this, the example of the others, a swarm from No. 8 added their forces to the other three. Thus four swarms were gathered together in one enormous cluster. The whole lot had issued and settled in less than thirty minutes. I thought the performance had concluded, but, at 10.55, the familiar

sound was again heard by a swarm from No. 7. This lot, however, settled on a tree a little distance away from the others, and were at once taken and thrown out on a sack to enter a skep placed at the side of their former home; but, while this was being done, out came a swarm from No. 3, and, as uniting was the order of the day, the bees of this swarm made straight for the skep, of which they took possession along with the others, and remained until returned to No. 7 hive, to which I gave an extra super (the third).

Is it not most unusual for four swarms to unite, and out of nine stocks of bees for six swarms to issue within forty-five minutes of each other?

As regards the season, I think it will prove to be the best here since 1902. While the clover has been in bloom we have had a fair amount of rain and plenty of dew at night. The bees, in consequence, made great progress the first fortnight of July, until then the sealing over of honey in the supers was very backward.

I have made a start to-day in the removal of supers, and if I may send you word as to the result with a few other details I shall be very pleased to do so.

As to the disposal of the four swarms, I wished to keep them together, to see how the work of such a large number of bees would compare with that of two united swarms hived about a month earlier, the produce of which has been three full supers.

The four combined lots were hived on June 20 in a "W.B.C." hive having eight new frames and two containing brood. It also had four supers on the top, one of which contained ten shallow-frames with about 12lb. of honey in when put on; beneath were two racks of sections and one box of eight new shallow-frames.

On July 15 these four supers were finished, and there are now on the hive some uncompleted sections taken from other stocks.

I think this colony has done very well since June 20.—E. R. N., Smarden, Kent.

A BEGINNER'S BEE-NOTES.

[5988.] After reading the following particulars, will you kindly tell me if I have been working on right lines with my bees? Last autumn I bought two good and heavy skeps of bees (swarms). The man I bought them from promised to help me along in managing them, but he has since moved out of this district, so that I am left to my own resources. Anyhow, I went to work and made two frame-hives from the description given in a dealer's catalogue, and put eight frames of foundation in each hive, with excluder zinc on top. I then put the above-named skeps on top of zinc. This much of my operations I gathered from my friend the "catalogue." This was in April last, and when removing one skep off floor-board, which they had wintered on, in one case, when lifting the skep, a piece of comb came away with it, and it was full of young bees in all stages. My idea in adopting this plan of transferring was to prevent swarming, and also to let the bees work down into brood-chamber.

All seemed to go on well after this till one day in June, when I noticed honey running out at the hive-entrance. I therefore determined to remove the skep and examine. I found that the combs in lower hive were nearly filled, but that the last two combs had broken out of frames and were lying partly on floor-board, with all honey gone, so I removed the frames, cut off the broken parts of combs, and returned them to the hive, with two more frames of foundation. I am now in a fix to know when and how I shall get the honey out of skeps; so I ask: 1. If I put two more frames in the other hive, do you think the bees would fill them so late in the season? 2. I have lately noticed a lot of drones coming out of brood-chamber; no doubt I let them out of skep when I shifted it. Will they do any harm?

I have a little adventure to tell you of which might interest readers. On Sunday, July 2, when taking a walk, I noticed a stray swarm clustered up in a tall elm; so, hunting up an old bucket, I climbed the tree, and succeeded in hiving the bees safely. This was the first swarm I ever saw, so you may imagine my feelings when up in that tree! On getting my prize home it was quite dark, and here I made my first mistake. I started to drive the bees into a skep in the dark, and in consequence got badly stung, for they crawled all over my body. However, by the light of a lantern I managed the job. Next day I made another brood-chamber, put in six frames of foundation, and hived the bees from skep into it next day. I have since looked under quilt, and find the combs drawn out; but am wondering if I lost queen when hiving the bees in the dark. 3. How can I find out if queen is with swarm? Also, do you think they will gather enough food to winter on before season ends? They cover five frames, and are working fairly well. We have a few lime trees in bloom round here, and there is still a little white clover in flower.

Next winter I purpose making six more frame-hives. Being a cabinet-maker, this will not trouble me much; but I want a good pattern to go by, so that I may be up-to-date. 4. Is the non-swarming pattern of hive with shallow-frame box under brood-chamber any good? I am making an observatory-hive on the same lines as an

ordinary frame-hive. It will have double walls of glass all round, with baize shutters on outside, or, I should say, on inside wall. I want to see how bees work in an ordinary hive, and am making this so that I can observe without disturbing them. Will the glass lining interfere with the wintering of the bees by moisture condensing on the glass?—BEGINNER, Wycombe, Bucks.

[1. It is fairly certain that the bees will not build combs and fill them with honey in your district so late in the season as this. 2. No; the drones will do no harm whatever. 3. You can only settle the question of queenlessness by examining the combs, and either finding the queen or seeing eggs or brood in cells. If neither is seen, the stock must be queenless. 4. You had better defer a trial of non-swarming hives till another year's experience has shown a real need for such. Very few old hands bother about non-swarming methods, except special circumstances necessitate the adoption of such.—EDS.]

BEE NOTES FROM THE MIDLANDS.

[5989.] *Dearth of White Clover.*—On page 272 of your issue for July 13, Mr. Woodley remarks on the dearth of white clover in present years in contrast to those of a few years ago; a dearth which apiarists reasonably regret. The hope in which Mr. Woodley indulges bids fair to be long deferred, and if we bee-keepers wish to be saved from the consequent heart-sickness, we must take other means to fulfil the hope. I am informed that there is no reason to suppose that farmers will return to the growing of white clover. In the first place, it is an expensive crop to grow, owing to the high price of seed, and the labour attendant on the ingathering, which usually comes at a very busy time of year—often during, or just before, the main harvest, when all hands are needed to clean roots and make up arrears which have collected during haytime. My informant (an agriculturist of some repute and an up-to-date man) also tells me that there is much more white clover seed on the market now from foreign countries, which have a warmer climate than ours, and one more reliable. This, of course, beats down the price, and British farmers are thus unable to make so high a price of their clover-crop for seed. The latter is also expensive to thresh and prepare for market, needing a great deal of individual attention, which, in these days of rush and hurry it is impossible to give. The idea, however, has been suggested that bee-keepers' associations should offer a prize at local shows, or in connection with their respective agricultural societies for "Fields of White Clover." Prizes of £10 or £5 would perhaps tempt the smaller farmers, if it did not the larger ones, and it is probable that if the matter be pushed we might get seed merchants to give at least part of the sum named.

Wide Combs for Shallow-frames. — My experience with regard to the wide "W.B.C." ends is exactly the same as Mr. Woodley's. To remedy the evil I have tried the two different widths placed alternately, one wide one narrow, and this has entirely prevented brace-comb.

Insurance.—My neighbour had a valuable young plum tree of a special kind. On that tree my bees saw fit to swarm, completely breaking off half the tree. My neighbour threatened vengeance! I wonder if I can claim compensation if he carried out his threat, as I am insured? I send name and sign—MIDLANDS, August 13.

HEATHER PROSPECTS IN YORKS.

[5990.] I visited the moors to-day (August 17) and found the bees working right merrily. When nearing the vicinity of the hives the smell of the honey was quite strong, and it was very gratifying on opening some of the hives to find several of the sections half-filled. The heather is coming nicely into bloom — probably one-half of it is in full bloom—but a nice rain is very much needed, otherwise I am afraid some of it will have to blush unseen. The prospects for a good season are better than for some years past, and those who have got so discouraged by the unsatisfactory results of recent years and have, in consequence, not taken their hives to the moors this time are likely to miss a chance they may afterwards regret. There are over a hundred colonies where my hives are located, but at Slapestones, above Osmotherley, the great stronghold in years past for this district there were only fifty-four a week ago. Further south, in the direction of Kirby Knowle and Boltby, the heather is slightly more forward, but there is nothing to complain of as regards bloom anywhere on the Hambleton range, and, with anything like good weather during the next fortnight or three weeks, the harvest will be a good one. As I am finishing this report, seated amongst the heather, there are signs of the much-needed rain, and, if I am not mistaken, we shall have it before morning.—R. T. T., Thirsk, August 17.

BEES IN NORTHANTS.

BEE ENEMIES.

[5991.] The honey season in North Northants does not, in my case, turn out as was hoped. I find that the brood-chambers are exceptionally light.

I do not know whether any of your

readers have noticed the destruction of bee-life caused by a small brown bird, with a light coloured breast, locally called a "woodlark"? It hovers near the entrance of the hive, until it gets a chance of snapping up a bee; it then carries its unfortunate victim off to a tree near by, and eats it. I have seen one bird eat a dozen bees in as many minutes. These birds like drones best, but when all the drones are gone they take bees.—W. A., Barnwell, August 21.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Inversion.—A writer in the *Bee-keeper* records that having to visit an out-apiary, he found hives with queen-cells in all stages, and, to save a break up, he turned the hives right over. On his next visit he found all cells destroyed, but a new lot on the way. Once more he inverted the hives, replacing all supers. After a third trial, there were no more thoughts of swarming, and the hives went into winter quarters "loaded with bees and honey, and came out in the spring almost as strong." He contends that any kind of hive can be inverted. This is an old acquaintance tried and found wanting, but if it could be made to work it might be a great boon and a saving of labour at an out-apiary.

The Folly of "Tinkering."—My greatest mistakes with bees were the result of "tinkering." "There is," says the same paper, "a vast amount of difference between practice and men tinkering. It is all right and necessary for one to open the hives and work with the bees to gain a practical knowledge of their instincts; but, upon the other hand, one may be ever tinkering yet never learning the habits of bees. Avoid the folly of tinkering if you would succeed." In other words, never open a hive without some specific and definite object, and once opening it, attain that object before closing up again.

A Honey-cure.—Mr. Louis Scholé, in *Gleanings*, recommends honey as a cure for sleeplessness. "Many times when it was impossible for me to go to sleep, I would get up after tossing about for several hours and take a spoonful of honey, and the 'medicine' was effective. To persons troubled with sleeplessness, I would recommend a light supper of bread, honey, and milk."

About Queens. 1. A young queen that has just commenced to lay stands a journey much better and generally proves to be of more value as an egg-layer after the journey, while a tested queen often turns out very poorly. The reason is a tested queen ought to be forwarded in a full colony or a nucleus at least. Young queens of this year's rearing, mailed as soon as they commence laying, turn out all right. 2. The plan of shaking bees into a ventilated box, and leaving them until they begin to "beg" for a queen, then giving them one in a cap from which they can liberate her by eating out the candy, is practically an infallible method, and may be tried with safety with a queen worth 100 dols. 3. I never attempt to introduce a queen with her escort of bees. I open the cage before a window, let out the occupants, catch the queen, and put her into a wire-cloth cylindrical cage, and consing the mailing cage to the flames. A queen alone does not communicate foul brood. 4. If I should find much difficulty in introducing queens to full colonies, I would start a two-frame nucleus from the colony, first introduce the queen there, and then unite the full colony. A weak nucleus of young bees will accept a queen, and a laying-queen surrounded by her own bees is almost certain to be accepted.—Culled from July *Review*.

Finding Queens.—Two writers in a late issue of *American Bee Journal* give directions for finding queens in almost identical terms. There is nothing very new in either, but for beginners they may prove useful. I choose that of Miss Wilson as the most concise, and, as she sometimes spots up to 100 queens in a day, she should know of what she writes:—"First give your bees just as little smoke as possible to keep them quiet. In opening your hive do it as quietly as you can, avoiding any sudden jar—anything that will alarm the bees and set them running. Remove the first frame and glance at each side of it for the queen. She is not likely to be on the first frame, although you will find her sometimes there. Set this frame down. Lift out the next frame and examine it, first looking over the further side, as the queen naturally inclines to get away from the light. Continue this with all the frames, moving them towards you as you return them. If you miss her the first time, repeat the process. If you have been so unfortunate as to start the bees running, you should close the hive and wait an hour, or even till another day." There is no royal road to finding a queen, and practice is what the novice needs. It becomes, in general, a simple process—although at times some queens, especially young ones, prove very illusive, and are real adepts at the art of hide and seek.

"Ripe" Extracted Honey.—The amount of comb-sealing necessary to guarantee that honey is fully ripened is a moot point, and the replies given in *American Bee*

Journal vary from "at least one-third" to "practically all," "three-fourths" being perhaps the favourite proportion. So good an authority, however, as Mr. C. P. Dadant contends "sealing has but little to do with ripening." Others say "it depends upon the weather;" "honeys and climates make a great difference;" "in a dry climate good honey may be got without waiting for sealing." The manner of the flow, the nature of the source, the state of the weather, the condition of the atmosphere, the quality of the nectar when gathered, all seem to bear on the question, and all are factors which must be taken into account. A few (not many) believe in artificial evaporation.

Clipping Queens.—This subject greatly exercises our Antipodean bee-brethren and the *Australasian Bee-keeper* publishes about nine columns on the "Advantages and Disadvantages of Clipping the Queen's Wing." Unanimity by no means prevails as to which preponderates. Thus the writer of the first-prize paper says:—"I have proved to my own satisfaction that clipping is indispensable in an apiary of 100 colonies," and he gives what he and the editor considers good and valid reasons for the faith that is in him, appealing even to Virgil, who "clipt the King's wing." Yet in another paper we find such divergent views as the following:—"Fancy a bee-keeper with 200 colonies clipping queens! What is to pay him for his trouble? Why, nothing! It is said bees are jealous of a clipped queen and supersede her at an earlier age than otherwise. In my opinion an apiary may be worked as well, if not better, where clipping is left severely alone." I have never practised this unnatural sacrifice to the good of utility, but my prejudices, if you like, cry against it as useless, and, at times, dangerous."

Queries and Replies.

[3866.] *Dealing with Cross-built Combs.*—Kindly advise me how to act with a hive of bees in the following condition: — A friend of mine (a beginner) made himself a hive with frames 15½ inches wide and 12½ inches deep. He put no comb-foundation in the frames, consequently the bees have built right across the frames. I found his mistake on being asked to remove a frame. He inquires if I can now put things right, and as I have not had a similar case to deal with before (being only a learner myself), I ask your kind advice on the following points:—1. When is the best time to do it, now or in spring? 2. Must each frame be cut out separately, and comb cut, and returned fitted with comb-foundation in it? 3. Should only two or three frames be done at a time, and what interval between each removal, or would cutting the frames apart be sufficient? I send full address for reference.—JOHN SMITH, York.

REPLY.—Our advice is not to risk the loss of your friend's only stock by attempting so tough a job as transferring bees and combs as proposed. No doubt a practised hand at such work could "put things right" if, on examination of hive and comb, it was thought worth the trouble; but a novice could not be blamed if he did more harm than good with such a task on hand. The best and safest plan will be to leave the bees as they are; pack them well for winter with plenty of food, and in the spring remove the outside combs, in order to reduce the size of hive to six or seven frames. Later on, when the bees cover these frames and begin to want room, set the hive on top of a new hive made to take the standard frame, and let the bees transfer themselves into it by passing below. They will then use the present hive as a super, and it can be removed when full for extracting. By this plan there will be no risk of loss, and things will be "put right" as they should be.

[3867.] *Wingless Queen in Hive.*—Will you please say in B.B.J. whether the enclosed queen is old or young? I removed her from a hive that has practically done nothing all summer; but, when overhauled yesterday, I found a fair quantity of brood in all stages. However, I determined to get rid of her and replace with a young one. Have I done right?—W. H., Northop, August 18.

REPLY.—Queen is a full-sized adult and apparently fertile; but both wings are entirely gone, only the stumps being left. It would appear as if for some reason of their own the bees had some time ago nibbled away the queen's wings, as the shoulders are quite smooth and bare, with no trace of wings left on them.

[3868.] *Unknown Insect in Comb-cappings.*—On the August Bank Holiday I judged the honey at Andover Annual Show. In the class for twelve 1-lb. sections an exhibit was staged of well-filled sections, good and even in colour, but in about half of them there was a considerable trace of those irregular minute lines, which I take to be the ravages of an insect burrowing through the cappings. That was the opinion I remember at one of the dairy shows some four years ago, and at which you were judging. Can you give me any information on this subject by replying to following:—1. Are the lines I have described caused by an insect? 2. If this is so, of what species is it? 3.

Would you place an exhibit not so well filled, but of equally even and good colour, before that having those lines mentioned? —JAMES LEE, Andover, August 17.

REPLY.—1 and 2. A full description of the damage done to comb-cappings (with illustrations from photos taken by Mr. F. W. L. Sladen) appeared in B.B.J. of May 21, 1903 (page 203). This will tell you all that is known of it up to the resent time. 3. Yes, certainly; seeing that sections disfigured and damaged in this way are unsuitable for table use.

[3869.] *Transferring from Skeps to Frame-hives.*—I should be glad of your advice in the following circumstances. Last year I purchased a stock of bees, and on May 27 last they swarmed. I secured the swarm and then left them in the hiving-skep, and, to my surprise, a month later a swarm issued from the skep (*i.e.*, from the first swarm). I secured them again and placed them in a second skep. I therefore ask:—1. Would it be advisable to unite these two swarms, and, if so, how should I proceed? 2. Should I unite now or wait until the spring? I should like to unite them and place them in a "W.B.C." hive if it is not too late. Thanking you in anticipation. Name sent for reference.—A LADY AMATEUR, Llangollen, N. Wales.

REPLY.—1. If the help of some bee-keeper (used to transferring)) was available, it might be advisable to transfer the bees and combs, as the latter will be all newly built; otherwise, we never recommend fitting up a new frame-hive with patched-up combs taken from skeps. Far better have new, straight combs in the frames, built from full sheets of foundation. Should it be decided to transfer combs and bees to the new hive, the sooner the task is done the better; but no "lady amateur" should undertake so formidable a task as uniting and transferring bees and combs. To do so would probably end in a disaster of some kind. On the other hand, full directions are given in the "Guide Book" for allowing the bees to transfer themselves in spring, and this course we recommend in your case.

[3870.] *Sugar for Bee-food.* — I send herewith a sample of sugar which has been guaranteed pure cane. Will you kindly say:—1. Is this suitable for feeding bees with either as candy or sugar; if not, what grade, as advertised in your paper, would be best to use? 2. I should also be glad to know if syrup or candy will keep long, as I should make quantities according to directions given in the "Guide Book"? 3. I have recently commenced bee-keeping, and have got a non-swarming hive. What feeder would you recommend for feeding under brood-chamber, when air space is provided below frames in winter packing? I send name for reference.—NOVICE, Eastbourne, August 17.

REPLY.—1. While doubtless pure cane, the sample sent is moist, unrefined sugar, and, as such, quite unsuitable for bee-food. For candy-making, lump sugar is generally used, but for bee-syrup that known as white crystals (No. 7 in our list) is very good. Demerara crystals (No. 4) is quite suitable for syrup used in spring, but for wintering on No. 7 is preferable. 2. It is not advisable to make candy in quantities for storing away, as it will become hard in time, no matter how well made, when kept in a dry place. Syrup will keep good for all season, if properly made and boiled as directed in "Guide Book." 3. The maker of non-swarming hive in question will supply a suitable feeder for use below frames. Those sent out by other makers may not be adapted for the hive you have in use.

[3871.] *Deposing Queen.*—Can you say why the queen we sent has been a failure? Is she an unusually "slim" specimen? The stock has been a very disappointing one, and I have now re-queened it.—B., Louth.

REPLY.—The dead queen sent has an indentation in the second segment of abdomen below thorax, which may account for her failing powers. No doubt you took the best course in re-queening the stock.

[3872.] *Uniting and Transferring Bees from Skeps.*—A friend of mine has recently started bee-keeping, and the worst of it is, he purchased two skeps, each containing a late "cast" of this year. Consequently he has only got two very poor stocks for wintering. I have therefore advised him to let me drive the bees of both skeps and unite the two lots, in order to make one good stock. He might then buy a driven lot of bees and put the whole three lots into a frame hive fitted with six frames of foundation. After this, he could feed slowly for, say, a month, then start to feed rapidly. Or would it be best to drive the two skeps and, after uniting the bees, return the whole to one of the original skeps to winter in. This would save the brood in one skep. There is very little honey or brood in either, and one lot of brood would, of course, have to be sacrificed. I should be glad to know if you think either plan would succeed?—A. W., Croydon.

REPLY.—Either of the two plans mentioned would probably answer if well carried out. But if it is proposed to buy driven bees for strengthening the two weak lots in one frame-hive, why not buy enough driven bees to strengthen each

skep, and thus stock two frame-hives, with a young queen at the head of each?

[3873.] *Early Granulation of Honey.*—About a month ago I extracted some honey from shallow-frames, filled by bees this season. I put the honey into 7-lb. self-opening tins. I had occasion to open one of the tins yesterday, and to my surprise I found it had candied. I then opened the other tins, and found they were all alike. Is not this unusual, and what is the best plan to reliquefy the lot?—J. C. Bulpham, August 21.

REPLY.—Much of the honey taken this season has granulated more rapidly than usual, and there is no way of accounting for it, except the usual climatic conditions at the gathering time. The honey can be easily reliquified by immersing the tins in hot water.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 26, at Barnton.—Honey Show, in connection with the Barnton Floral and Horticultural Society. Two classes open to the county and all members of the C.B.K.A. **Entries closed.**

August 29, at Cartmel, Lancashire.—Honey Show, in connection with the Thirty-third Annual Show of the Cartmel Agricultural Society. **Entries closed.**

August 30, at Reading.—Honey Show of the Berks B.K.A., at Forbury Gardens. Schedules on application to D. W. Bishop Ackerman, Hon. Sec., 161, King's Road, Reading. **Entries close August 26.**

August 30, at Chester.—Annual Show of the Cheshire Agricultural Society. Honey Department under management of C.B.K.A. **Entries closed.**

August 30 and 31, at Osmaston Park, Derby.—Derbyshire B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances. Fifteen classes (four open). For entry forms apply R. Coltman, 49, Station Street, Burton-on-Trent. **Entries finally close August 26.**

August 31, at the Montgomery and District Horticultural Society.—Two classes for honey open to residents in Wales, and to counties of Shropshire, Herefordshire, or Cheshire, for six 1-lb. jars extracted honey, and for six 1-lb. sections; prizes 10s., 5s., 2s. 6d. Entrance fee 1s. Schedules of Mr. W. J. Jones, Secretary, Montgomery.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. **Entries closed.**

September 2, at Bramhall, in the grounds of Bramhall Hall.—Bramhall and Woodford 16th Annual Show. Three open classes for honey and wax; four to district; C.B.K.A. medal offered. Prizes 15s., 10s., 7s. 6d., 5s., 3s., 2s. Schedules from John Sibson, Hon. Sec., Hawthorn Grove, Bramhall, Stockport.

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes, Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 12, at Woodstock.—Honey Show of the Oxfordshire B.K.A., in connection with the Woodstock Agricultural Show. Open Classes (with free entry) for single 1-lb. section and single 1-lb jar extracted honey. Prizes, 10s., 5s., and 2s. 6d. in each class. Schedules from H. M. Turner, 4, Turl Street, Oxford.

September 13, 14, and 15, in Waverley Market, Edinburgh, along with Great International Flower Show. Four open classes for Sixes, Sections, and Bottles of Flower and Heather respectively, with prizes of 15s., 10s., 5s., and 2s. 6d., for an entry fee of 2s. each class. Schedules now ready from W. Weir, Secretary, Heriot, Midlothian.

September 14, at Castle Douglas.—Dairy Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section, with free entry. Gold medals and liberal prize money offered. Eight classes, for members only, including classes for six heather sections, six 1-lb. jars, and supers any weight Schedules from Q. Aird, Secretary, Hardgate Schoolhouse, Dalbeattie, N.B. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 27, at Altrincham.—Annual Show of the Altrincham Agricultural Society. Good Money Prizes for Honey, along with Silver and Bronze Medals of the Cheshire B.K.A., and others. Open Class for Frame-Hive (unpainted). Schedules from J. Herbert Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 3 to 5, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** We are asked to publish the following letter:—Referring to the request of "L. C. B., Teddington," with regard to visiting apiaries, in B.B.J. of August 10 (page 320), I may say that I have ten stocks of bees, and would give him

any further information he may require in conection with bee-keeping. I should be able to manipulate the bees at any time, and thus instruct him in managing them should he decide to make a start. —H. SPENCER, Saddler, 6, Broad Street, Teddington.

A BEE-KEEPER (Maybole) and D. ROBINSON. —Cleansing Beeswax.—1. The several methods of rendering and cleansing wax are (1) the "Solar Extractor," (2) Professor Gerster's method, and (3) the simple plan of immersing a bag containing the combs in boiling water. The first two plans are illustrated and fully described in the "Guide Book." 2. The main impurities to be got rid of are old pollen, and the cocoon (or skins) of larvæ left in brood-cells. A little nitric acid added to the water in which the combs are melted will cause the impurities to settle more readily. To produce the bright yellow colour, some use a little annato in the water wherein the wax is melted.

PUZZLED (Yorks).—Bees Refusing Foundation.—1. There must be some fault in the foundation used, or bees would never build combs between the sheets and leave the foundation untouched. 2. It is quite usual for bees to lengthen out cells of comb next the top-bar, as these cells are seldom used for brood-rearing. 3. There is no disease in comb. 4. If the colony is growing weaker it is certain that the stock needs a new queen, and should have one at once.

L. C. P. (Norwich).—Varieties of Heather. —No. 1 is Erica cereana (or bell heather). No. 2, Calluna vulgaris (or common ling). The last-named is by far the best for honey.

R. T. (Belfast).—Bee-flowers.—Plant received is *Scabiosa succisa* (Devil's Bit). It is not regarded as a bee-flower of any note or value.

MEL ROSÆ (Yarmouth). — Bee-forage Plants.—No. 1, *Lotus corniculatis* (bird's-foot trefoil) yields a fair amount of honey and pollen. No. 2, *Genista tinctoria* (greenweed) is not included among bee-forage plants.

W. E. C. (Bromley).—Sugar for Bee-food. —1. Pure cane sugar can always be had through B.B.J. office. 2. Refined white crystals is the right kind to use. 3. Any beginner can recognise pollen in cells if once it is pointed out to him by a bee-keeper. 4. It is quite common for bees to cover pollen in cells with a layer of honey, which latter preserves the pollen for use and keeps it soft.

W. G. (Bristol).—Carniolan Bees.—The most extensive apiary for breeding Carniolan queens is that of M. Michael Ambrosic, Moistrana, Krain, Austria.

Honey Samples.

T. W. C. (Colchester).—Sample No. 2 is best for the show-bench. It is of good flavour and colour. No. 1 is fairly good, but inferior to No. 2.

BEE-KEEPER (Maybole, N.B.). — Both samples are very good honey indeed. Of the two we prefer that marked "A," but either is well suited for showing.

HONEY (Derby).—Sample "A" is good in colour and flavour, but too thin to stand any chance in a good show. "B" is much better in quality, and quite fit for showing.

R. L. (Somerset).—However lucky your honey may have been when shown in sections, it is too thin to stand any chance in liquid form.

H. M. (Dumfries).—Both samples are very good indeed. We rather think your Scotch judges would prefer No. 1 on account of its greater density; but No. 2 is brighter, and free from the minute air-bubbles so plentiful in No. 1.

MEIRIONWR (Dolgelly).—Your honey is good in flavour and colour. It is from mixed sources, which cause the deep golden colour of sample.

W. J. C. (Newport, Mon.).—Sample is very good on all points.

Suspected Combs.

J. H. L. (Halifax).—There are signs of incipient foul brood in comb No. 1, but the bulk of dead brood has died from chill. The comb might be ten or fifteen years old, so black is it. No. 2 has no trace of brood in it at all, and only cells on one side, the reverse showing mid-rib only. This also is old and black.

APE (Essex).—There is foul brood in hive from which this was taken. If the colony is strong in bees the latter might be shaken off the combs and treated in the usual way recommended in the "Guide Book." You should never send a full standard-frame of comb for diagnosing; a small piece is ample for our purpose.

A. H. N. (Uppingham).—A bad case of foul brood.

ARIS (Ayrshire).—No disease in comb sent. We congratulate you on your good "honey-take" this year. "Over 1,000 lb. from twelve hives" should satisfy any bee-keeper.

CYMRO (Llangollen). — You have made a bad bargain in buying the beeless hive, seeing that the comb sent is badly affected with foul brood, so bad that all frames, combs, and quilts should be burnt. If the hive is worth disinfecting it should be done thoroughly before using again.

******* *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

SHROPSHIRE B.K.A.

ANNUAL SHOW AT SHREWSBURY.

The annual show of this Association took place on August 23 and 24, in the Quarry at Shrewsbury, in connection with the Horticultural Society's magnificent meeting, which has become celebrated all over the kingdom. The Rev. T. J. Evans (Rock Ferry), Mr. R. Cock (Stafford), and Mr. J. Thomas (Hereford) officiated as judges, and they reported that the display was one of the best they had ever seen. The total weight of honey staged was 2,337 lb. The gift classes for single 1-lb. jar and for 1-lb. sections secured 39 entries. The full list of awards made is as follows:—

OPEN CLASSES.

Twenty-four 1-lb. Sections.—1st, James J. Clay, Wellington; 2nd, S. Cartwright, Shawbury.

Twelve 1-lb Sections.—1st, James Clay; 2nd, A. W. Weatherhogg, Willoughton; 3rd, Miss Radcliffe, Barthomley, Crewe.

Twelve 1-lb. Sections (other than $4\frac{1}{4}$ by $4\frac{1}{4}$). — 1st, James Clay; 2nd, A. Hamer, Llandilo.

Twenty-four 1-lb. Jars Extracted Honey.—1st, J. Boyes, Cardiff; 2nd, S. Cartwright, Shawbury; 3rd, T. S. Jones, Welshpool.

Twelve 1-lb. Jars Extracted Honey.—1st, R. Morgan, Cowbridge; 2nd, J. Berry, Llanrwst; 3rd, W. F. Fake, Great Massingham.

Twelve 1-lb. Jars Medium-coloured Honey.—1st, W. E. Hyde, Ledbury; 2, J. Helm, Norton Canon, Hereford; 3rd, James Clay.

Single 1-lb. Jar Extracted Honey.—1st, W. F. Fake 2nd, A. W. Weatherhogg; 3rd, J. Leech, Harmer Hill.

Single 1-lb. Section.—1st, James Clay; 2nd, P. Jones, Church Stretton; 3rd, S. Cartwright.

MEMBERS' CLASSES.

Twenty-four 1-lb. Sections. — 1st, James Clay; 2nd, P. Jones.

Twelve 1-lb. Sections.—1st, James Clay; 2nd, P. Jones.

Twenty-four 1-lb. Jars Extracted Honey.—1st, S. Cartwright; 2nd, James Clay; 3rd, Mrs. W. Powell, Longley.

Twelve 1-lb. Jars Extracted Honey.—1st, E. Brookfield, Myddle; 2nd, James Clay; 3rd, S. Cartwright.

Twenty-four 1-lb. Jars Dark Extracted Honey.—1st, P. Scott, Broseley; 2nd, P. Jones.

ARTISAN MEMBERS ONLY.

Twelve 1-lb. Sections. — 1st, L. Powell, Longley.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Mills, Shavington; 2nd, J. Churton, Wollerton.

Six 1-lb. Jars Extracted Honey. — 1st, J. Mills; 2nd, J. Churton.

COTTAGER MEMBERS ONLY.

Six 1-lb. Sections.—1st, Jasper Jones, Church Stretton; 2nd, J. Bright, Cardington; 3rd, D. Croxton, Hope Bowdler.

Single 1-lb. Section.—1st, Jasper Jones; 2nd, J. Bright; 3rd, D. Croxton.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Stanton, Basford; 2nd, J. Jones, Shrewsbury; 3rd, G. Lloyd, Overley.

Six 1-lb. Jars Extracted Honey. — 1st, R. Jones, Bomere Heath; 2nd, J. Stanton; 3rd, J. Jones.

One 1-lb. Jar Honey.—1st, J. Stanton; 2nd, T. Croxton; 3rd, Mrs. Davies, Nesscliffe.

OPEN CLASSES.

Honey Trophy. — 1st, W. H. Brown, Shrewsbury; 2nd, A. Hamer; 3rd, P. Scott; 4th, J. Bradley, Yockleton.

Complete Frame-hive. — 1st, W. P. Meadows, Syston, Leicester; 2nd, Little and Cooper, Shrewsbury.

Collection of Bee-appliances.—1st, W. P. Meadows; 2, Little and Cooper.

Two 1-lb. Beeswax.—1st, Miss H. Ratcliffe; 2nd, R. Morgan.

1-lb. Beeswax (Salop only).—1st, T. Hartshorn, Broseley; 2nd, Mrs. Powell.

LANCASHIRE B.K.A.

SHOW AT CHORLEY.

Held on Saturday, the 19th inst, in connection with the show of the Agricultural Society. There was a very fine display of honey, the competition being very keen and the winners running each other very closely. Mr. F. H. Taylor, County Bank, Chorley, judged the honey and made the following awards:—

Six 1-lb. Jars Extracted Honey. — 1st, T. S. Holdsworth, Kirton Lindsey; 2nd, R. Rymer, Hesketh Bank; 3rd, Chas. H. Bocock, Newmarket; r., James Higham, Rainhill; v.h.c., John Wilson, Rainhill; h.c., W. Lowe, Rainhill; Cook and Altey, Tarleton; and G. Dawson, Ormskirk; c., H. Finney, St. Helens.

Six 1-lb. Sections.—1st, J. Jones, Wegber Quarry, Carnforth; 2nd, T. Ormesher, Ormskirk; 3rd, not awarded.

SPECIAL PRIZES.

Given by Mr. Frederick H. Taylor, Hon. Treas., Lancs B.K.A., for best exhibits from the county:—

Silver Medal.—Robert Rymer.

Bronze Medal.—J. Jones.

Owing to the heavy gales the bee-tent could not be erected, but a lecture, without demonstration, was given in the honey-tent by Dr. Jones, of Freckleton, First-class Expert B.B.K.A.—*(Communicated.)*

BISHOP'S STORTFORD B.K.A.

ANNUAL SHOW.

This show, held at Bishop's Stortford on August 16 in connection with Horticultural Society's Exhibition, was favoured with an exceptionally fine day, and there was a record attendance of 10,000 visitors. The honey department—arranged by the Bishop's Stortford Bee-keepers' Association—was the best ever shown, and there was a large increase of members' exhibits. The honey was judged by Mr. W. Debnam, of Chelmsford, whose awards were as follows:—

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, W. Woodley, Newbury; 2nd, W. J. Kitson, Stanstead; 3rd, J. Short, Chesterton.

Six 1-lb. Sections.—1st, W. Woodley; 2nd, E. E. Brown, Somersham; 3rd, W. J. Kitson.

Six 1-lb. Jars (Light) Extracted Honey.—1st, R. Brown, Somersham; 2nd, J. Short; 3rd, W. Woodley.

Beeswax.—1st, W. J. Kitson; 2nd, R. Brown; 3rd, Miss M. Wilson, Gt. Canfield.

Honey Trophy.—1st, J. W. Kitson.

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, Miss Yates, Little Henham; 2nd, D. Heath, Thremhall Priory; 3rd, C. J. Dodd.

Six 1-lb. Sections—1st, Miss Yates; 2nd, L. Debnam, Aldbury; 3rd, C. J. Dodd.

Three Shallow Frames of Comb Honey.—1st, D. Heath.

Six 1-lb. Jars Extracted Honey. — 1st, D. Heath; 2nd, E. Barrett; 3rd, Miss Yates.

Beeswax.—1st, Miss Yates; 2nd, G. C. Burgess; 3rd, L. Debnam.

Honey Trophy.—1st, Miss Yates.

During the afternoon lectures were given in the bee-tent to good audiences by Mr. W. Herrod, Expert of the B.B.K.A. and Lecturer to the Herts County Council.—(Rev.) HERBERT J. NEWMAN, Hon. Sec.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

DEALING WITH FOUL-BROODY STOCKS.

[5992.] In a very bad case I have already advised total destruction as the best, cheapest, and most reliable means of getting rid of the disease, and, if it is discovered in any stock or stocks lately introduced, this drastic method should be followed—irrespective of value of the colony—to preserve the whole apiary from contamination. If of no milder type, and the bees are numerous, the McEvoy plan can be followed with success—that is, the British form of the device, which includes not only the giving of new combs to build, and a clean sterilised hive, but also the consumption of all stores in the honey-sacs, and a period of starvation to ensure that all germs have been destroyed. In all these processes the brood is sacrificed, and many object to go to this extreme at a period of the year when brood is abundant, especially if the case is not a very pronounced one, and the honey-flow on. In such an event it may be well to adopt one or other of the following methods, whereby brood is preserved and the cure applied at the same time. All of these require a second hive, wherein to introduce the bees and queen, and secure new combs for the healthy colony.

1st.—Assuming that the bees are numerous, brood abundant, but the disease manifestly present, place a new hive on the old stand in the morning of a fine day when forage is plentiful. Shift the old hive to a new stand some distance away, first catching and caging the queen, placing her on a clean frame in the new hive. By evening all the flying bees will have joined the queen on the old home-stand, and, finding an empty house, will at once proceed to furnish it. In twenty-four hours the queen may be liberated, and the workers will do their very best to fill every comb with honey and eggs. The old hive can be gradually brought alongside, shifting it only a few feet each day, so that the bees may mark their location. In about ten days or a fortnight shift it back to a distance, when all the flying bees will join their sisters, thus considerably strengthening them. The gradual bringing it back into line can again be repeated, when it may be bodily carried away and all the bees allowed to join their fellows. Combs now quite empty of bees and brood, and with very little honey, can then be disposed of in such a way as to avoid further evil.

2nd.—The process is somewhat similar to the foregoing, but instead of shifting the hive to a distance, it is simply placed alongside, and turned at right angles to the new one. From the old, or foul-broody, hive the bees are allowed to fly only through a "Porter" bee-escape, when on coming home from the fields they make for the old entrance, and, of course, enter the new clean hive. If a fresh comb containing brood and eggs from another hive is given

the bees will accept the new home without demur, but the queen can be caged on this new comb, thus making assurance doubly sure. Now, in a few days, other than adult bees fly from the old hive, so it can be placed close to the new one with entrances facing the same way. These later-hatched bees have no means of exit but by the bee-escape, and no means of entrance but into the new hive, which in about a month will secure all the bees of the diseased colony. No time is lost with this plan, there is no loss of brood, and no danger of carrying infection, while the house interior is all new built from nectar fresh from the fields, and, therefore, free from all germs of disease. Perhaps, if there should be any doubt of the purity of the queen, it may be best to dispose of the old lady and give the bees a fresh young one. This always aids in working a cure by importing fresh energy.

3rd.—The newest device is mainly on the same lines as the other two, but in one or two points it may be considered an improvement. The old hive is here placed above the old one, with a wooden tray between, which effectually divides the two hives, so that there is no bee-way from the one to the other. In front of this tray a hole is cut for an exit, and a channel or tube is placed against it, forcing the bees, as the only means of egress, to walk down its whole length and come out on the new flight-board through a hole in the passage opening inwards. This bee, on coming home from the fields with its load, walks in at the new entrance into the new hive, so becoming one more unit to swell the numbers of the new colony, which, in about five weeks, has absorbed all the increase in the upper hive without any trouble of watching or shifting hives on the part of the keeper until no brood and no bees remain.

In all of the three plans given, there should be no shaking of bees, no smoking, or gorging of bees with foul honey, and no direct communication between hive and hive. The last idea is to convey no germ of the disease to the new home. Bees leaving home to forage have their honey-sacs empty; what they carry home contains no seeds of disease, therefore their renovated home is completely furnished with new works containing neither germs nor spores. Early this season I shifted two tainted hives for a friend, getting their united flying bees to amalgamate in a new hive. They made a nice strong lot, showing no signs of the disease in the new combs, and are likely to yield considerable surplus. After the second shift back, they were left quite clear of brood and bees, when the combs, quilts, and frames were burned.—D. M. M., Banff.

BEE-KEEPING AS A BUSINESS.

[5993.] Referring to the letter of "D. P. J., Cumberland," in B.B.J. of August 17 (5974, p. 324), may I join with "D. P. J." in saying that I, too, should be exceedingly interested in seeing something from the pens of your two correspondents mentioned in the first paragraph of that communication?

I hesitate to ask for a personal letter from either of the gentlemen referred to, as if they start writing to all who would like to hear from them I fear they will soon be wearied.

I have recently started to experiment in a small way with the object of discovering in the only satisfactory manner—by practical experience—how bee-keeping, poultry-keeping, and fruit-growing would work together. As I live only a few miles out of London, there is every probability of being able to sell retail the greater part of my produce, for a time at any rate. I should prefer to keep to the retail trade if possible, but if the business grows, as I am hoping it will, the question of delivering my goods will be one that will have to receive consideration, seeing that for a few years I must continue to earn my living in my present position, devoting only my spare time to working up the business I have in view. I have yet to find out how many hives I can manage satisfactorily in the time at my disposal, but perhaps your correspondents could give some hint as to the number of colonies that could be managed by one man, with perhaps a little help, when giving his whole time to the work? I should also be glad to know their views as to the comparative advantages of selling retail and wholesale, in point of cash returns and time expended.

One reason for my proposal to adopt the three-sided business mentioned is, that I think the three things would fit in well one with another; and a second reason is that if I decide on developing a retail business it will be an advantage to have something or other to sell at all times of the year, so as to keep in constant touch with my customers.

Should your correspondents feel inclined to let me know something of the results of their experience of the bee from a business point of view, either by private letter or through the B.B.J., I should be very grateful.

I may mention, in conclusion, that my experience is so far encouraging, that I am now making arrangements to start next year a small out-apiary at a village further in the county, in the neighbourhood of some scores of acres of raspberries, etc. I take this opportunity of thanking

you for the help already experienced from reading your valuable journal. Name, etc., enclosed for refrence.—WEST KENT, August 21.

EXPERIENCE WITH VIRGIN QUEENS.

[5994.] Enclosed I send you a yellow queen. I got her from a well-known queen-breeder on August 8, and introduced her to a prepared stock the day after she arrived. She was received all right, and an examination on Monday, the 14th inst., showed her parading the combs in the way any orderly virgin queen would do. Less than a yard away, and facing in same direction, is a strong nucleus which contained a black virgin queen—a fine, big specimen—but on Wednesday, the 16th, on looking into this lot to see if there were signs of mating having been accomplished, I found the bees in a very excited state, and I could find no trace of the queen. The latter fact, however, did not surprise me, as the bees were so excited, and being a very strong lot made finding a probable virgin queen none too easy. Anyway, I felt very certain the queen was gone, so closed up the hive and proceeded to examine the stock containing the yellow queen. The very first frame I lifted had such a fine big black queen. Placing this frame outside the division-board, I took out the next frame, and there, "balled" and dead, I found my yellow queen.

Evidently, the black one, when out in the afternoon for mating purposes, had entered the wrong hive, killed the yellow queen, and took up her position at head of the colony. I have never known this to happen before, and many say the appearance of the two hive-fronts is as different as night and day.

I also had another experience as follows:—A virgin queen mated a day or two ago, seventeen days old—*i.e.*, seventeen days from the date of her hatching out. She left the hive at 2.53 o'clock, and returned mated at 3.15. Was it likely she was on the wing all the twenty-two minutes? I have generally found ten minutes about the average duration of absence.

Glorious weather now. I have two stocks at the heather. I sometimes ask myself when shall we get a *perfect* hive for taking to the moors? Name sent for reference.—J. W., Bramhall, Cheshire.

[The yellow queen sent bore none of the usual signs of "balling." It, therefore, seems as if the black one had been victor in a royal duel, the bees taking no part therein. 2. There are heather-going hives now on the market that, to our mind, leave little to be desired with regard to efficiency.—EDS.]

BEES IN YORKSHIRE.

[5995.] Just a line to let you know how we are getting on here with the bees. It has been a very good time so far. I took a nice lot of surplus honey from my hives during the middle of July. I have never before got any so early, my first "take" usually being removed on August Bank Holiday. I have also now got some hives at the heather, and as they are in good form, if the weather continues favourable, I shall have a record take this year. I seem to be doing better since I increased my number of stocks. You seem to be more sure of a substantial surplus. Wishing the JOURNAL every success, I send name and sign—ELECTRO, Sheffield.

THE BEST BEE FOR THIS COUNTRY.

[5996.] Our friend "D. M. M., Banff," in his article on page 323, has opened the question of the best bee for this country, and I may be allowed to add my quota to the discussion of the subject. To my mind the one vital point to remember in the use of Italian bees is the rapidity with which they become chilled, and the thousands that are lost in exposed situations—particularly in the north— at a most important time, viz., spring. Given a warm climate and a sheltered valley, with a big honey-flow, there is no doubt Italians will do well, but not otherwise. He also speaks of Ligurian bees having a strange habit of deposing their queens early in the season. The question arises—Does this fault lie altogether with the race of bees, or is it more or less attributable to our methods of queen-raising? I think myself that the operations now carried out by queen-raisers may result in a partially-chilled larva, or pupa, which may lower the vitality of the resulting queens. I would also point out that no bees are included in cell-nurseries to care for the virgins. I am aware that Mr. Cowan in the "Honey Bee" (page 141)—in alluding to virgin queens—says: "Before she flies for impregnation, the bees do not even feed her, nor does she take any notice of the workers." This may be accepted as true in the general sense, I admit; but, according to my experience, the workers do bestow a large amount of care on the virgin queen. To mention a case in point:—A queen hatched August 9. On August 11 I was watching this stock and saw ten workers feed the virgin queen. Again, on August 12 two workers fed her.

I am caging workers with queen-cells, and have had a young queen hatched out, mailed, and introduced to a stock while a virgin without her being handled at all.

In giving my experience as a travelling expert, I am within bounds in saying that

one-half of our imported Italians are short-lived. This is a serious drawback against them.

I may here mention another item of interest connected with queen-rearing. I have this season reared queens (by a new process) direct from the egg, *i.e.*, the queen-cells in every case were built before the egg hatched, and they have produced strong, vigorous queens. These queens will be tried in various apiaries—their vigour and longevity being noted for future reference.

The proneness of the Italian bee to chill has been lessened by crossing with the black, with the result of bringing on viciousness. I ask:—Why? In my opinion too many of our apiarists do not understand the true parentage of the drone; hence, a really good hybrid is not often produced. This should be:—Queen, English; drone, Italian. But to produce a true hybrid requires breeding five generations of bees. We also want a more scientific term to describe the first (male) parentage of the drone. I am strongly in favour of a hybrid that will produce not only hybrid queens and workers, but true hybrid drones, and long observation convinces me that a most desirable cross would be:—Queen, English; drone, Carniolan.

Seeing that "D. M. M." is located so far north I should like to ask him what method he employs to secure late fertilisation of queens? Here, in England, the "mating days" must be exceptionally good to secure a vigorous flight of drones and arouse virgin queens to activity. It would appear that American queen-raisers are more highly favoured than us by climatic conditions, and thus secure successful fertilisation far more readily than we can here.

Travelling as I do from apiary to apiary and examining various races of bees, I find no difference between them in the power of resisting foul brood, though stocks inclined to rob are most likely to carry home the disease.

At some future date I trust—with the Editors' permission—to return to the question of queen-raising, hybridising, and drone-parentage.—J. Gray, Travelling Expert and C.C. Lecturer, Long Eaton, August 24.

BEE INSURANCE.

DATE FOR TAKING OUT POLICIES.

[5997.] Now that we are invited (on page 332) to renew our insurance policies, will you allow me to raise the question of the suitability of the time, which I have long been waiting for some one else to do? In my judgment and experience the month of May is the proper and suitable time for a policy to be dated. Bee-keepers can then, and only then, determine where their stocks are likely to be located for the season, through removal, or by being placed out upon, or near to, bee-forage, which can only be discovered in the spring. I insured seventy-seven hives last year, most of which went from home in the spring, and I have to pay for sixteen black chickens which my bees were supposed to have killed, and which were placed in a locality that I had not the slightest idea the previous August would be available.—T. W. S., Haconby, Bourne, August 26.

MATING QUEENS IN BABY NUCLEI.

[5998.] I think it may interest you to hear that I have succeeded in mating several queens this season in "baby nuclei," à la Swarthmore.—F. W. M., Worthing, August 2

DUPLICATE SHOWING.

A USEFUL RULE FOR SCHEDULES.

[5999.] Some time ago a correspondence took place through your columns as to the above, and the unfairness that it could be responsible for in some cases, but, so far, I have not seen any announcement in the B.B.J. that a remedy has been suggested. I enclose a copy of the regulations of the Shropshire B.K.A., who have taken this matter up, and at their annual show held at Shrewsbury last week, and also last year—when the new rule was adopted—it has had a most beneficial effect, and will, no doubt, work to the advantage of the show, and also give satisfaction to the bulk of the exhibitors.

The rule referred to is No. 8, one portion of which reads thus:—"and only one entry in each class may be made by two or more members of the same family, partners, or exhibitors working their apiaries jointly." I send name, etc., for reference, and sign

Wrekin, Salop, August 27.

BEES AS HONEY CARRIERS.

[6000.] I send particulars of the following incident, thinking it may possess interest to some B.B.J. readers by showing how long it takes a bee to deposit its load in the hive:—A bee came into the house through a window about 100ft. from my hives, and having honey in the room, I gave some to the bee. After filling its honey-sac, it flew away to the hive, and in a short time returned for another load. This happened twice before the thought of taking any note of the time occupied occurred to me; but I then timed the bee for eight journeys. The average time for each trip to the hive, discharging its cargo, and getting back was 8½ minutes. The

time occupied in "loading up" with honey in the room was slightly longer, being $8\frac{3}{4}$ minutes. The amount of honey carried off in the eight journeys was about one-quarter of a teaspoonful.—S. H. H., West Derby, August 25.

Queries and Replies.

[3874.] *Bees Destroying Queen-cells.* — One of my best hives, from which I have taken 60 lb. of extracted honey, has lately proved rather disappointing, and I shall be obliged if you can tell me in what way it has been mismanaged. The queen, a common brown one of last year, started laying earlier than those in my other hives; a fact which I attribute to her having wintered with an extra large colony, her own progeny being united to another stock last autumn. In May I took from this hive about six frames of brood, when making an artificial swarm from it and another one. In spite of this, I thought it advisable early in June to give a second brood-chamber as the hive was so very full of bees. This was after a good deal of honey had been gathered in a shallow-frame super, which the queen was also laying in. I put the second brood-chamber below the other, and this evidently delayed swarming, but the queen never used it for breeding, and though it was my most populous colony, no swarm issued from it until July 7, nearly a month after my other hives had swarmed. This swarm (a small one) was duly hived and is now all right. By this time the hive had nearly filled one super and got well started with a second. The former I removed next day (July 8), and after shaking the bees off the frames I saw two sealed queen-cells on one of them. Then, after this things began to go wrong. I had read that queen-cells should not be shaken, but the mischief, if any, was done, and I decided to give the cells a chance of hatching, so cut them out and replaced them in the hive between the frames in brood-chamber. Two days later, on examining the latter, I found that the bees had torn open the sides of not only these two cells but four or five others. Although I feared that every young queen had been destroyed, it seemed so unlikely that queenless bees would not preserve a single cell that I decided to wait and see what happened before giving a fertile queen. However, as no eggs had been laid up to July 25, I united the colony to a nucleus in which was a young prolific queen; but she, I think, must have been "balled," or in some other way injured, as she has not since deposited any eggs. When uniting the above lots, I placed the nucleus above the other for a night, separating them with brown paper pierced with small holes for ventilation. I intended to leave them for twenty-four hours, but on examining next morning I found some bees had somehow made their way up from below; but as there was no sign of fighting, I concluded that the danger was passed and at once united by alternating the frames after dusting both lots with flour. Before putting the nucleus above the other brood-chamber I had removed the super from the latter, and fear that by doing so I left them short of stores, but on noticing this two days later I at once began to feed with syrup. Can you, from what I have said, tell me:—1. If I did anything to cause the bees to destroy their queen-cells in the first instance? 2. Supposing that the young queen was not "balled" on being introduced to the queenless stock, would the fact of their food supply being short for two days cause her to cease from laying? 3. As she has not laid for ten days, is there any possibility of her beginning to lay again? She is still in the hive, and as she began exceedngly well in the nucleus hive, I am loath to destroy her if of any use. Apologising for length of my queries, and thanking you for past advice.—E. L., Perthshire, August 3.

REPLY.—1. The most natural inference we can draw from details given is that one queen would be allowed to hatch out, and that she has been lost on her mating-trip, thus rendering the stock queenless.

Your frequent manipulations may have upset the bees, and disarranged their ordinary procedure, thus causing destruction of young queens that would otherwise have been allowed to hatch out. 2. As the supposed shortage of stores was so soon noticed and bees fed without delay, this alone would not have caused the queen of nucleus-hive to cease laying. 3. If feeding is continued it is more than probable that breeding will recommence before the autumn closes.

[3875.] *Removing Honey from Non-swarming Hives.*—Your advice on the following would be greatly appreciated. I started bee-keeping last spring with one stock of bees and non-swarming hive depicted in "Guide Book." I chose this hive on account of the non-swarming arrangement, but, as a beginner, I have found it rather complicated, particularly so when I went to remove the surplus honey from it yesterday. Indeed, it is here where I am in difficulties. It now contains two racks of shallow-frames filled and ready for removal, but I had to use an improvised lever to lift the top-rack to put on a super-clearer. After doing this, I found the two supers were fastened together by brace-combs, and, in separating them, most of the frames in the bottom

super were lifted out of position. I also fear the frames in the brood-chamber have been disturbed. The hive, I may say, has single side-walls, and the plinth is one inch deeper than the super, so you will readily see that with the frames in the bottom super lifted up one inch, any attempt to employ the "screwing motion" to sever brace-combs (as advised in the "Guide Book") would result in the frames and combs being broken. I wish to avoid this in order to keep the combs for future use. 1. There seems no alternative but to remove the frames singly, and I ask:—If these were put into an empty hive ("W.B.C." pattern) over clearer would the bees leave them and return home? If this course is not likely to be successful what do you advise? 2. Is there any way of preventing brace-combs? I have seen it stated that a quarter-inch bee-way below frames instead of half-inch is a preventive. This seems simple enough, if correct. What say you? 3. I notice in last week's B.B.J. you tell a correspondent that Demerara sugar is not suitable for making syrup, etc. I laid in a stock of this for wintering, and it was sold to me as pure cane sugar. There is something wrong here.—NEOPHYTE, Beds.

REPLY.—1. You might fill the empty shallow-frame box of a "W.B.C." hive with the removed frames and set it over the non-swarmer, with a super-clearer between, and let the bees pass down below. 2. Yes, the statement you mention as having seen is quite correct; but a half-inch space between supers and brood-chambers will usually cause brace-combs. 3. The only thing wrong is your being supplied with moist, unrefined sugar, which—even if pure cane—is unsuitable for bee-food. Only "refined cane sugar" (in crystals or lump) should be used for this purpose. We cannot undertake post-replies to queries.

[3876.] *Clearing Bees from Supers in Single-walled Hives.*—I should be much obliged if you or any reader would kindly advise me how to clear supers of bees in single-walled hives. I note advice how to do it by means of the "Porter" bee escape clearer in double-walled hives, but I have been humbugged a great deal this season with one of these in using with my single-walled hives. There appears to be nothing wrong with the escape as far as I can see (that is, no blocking up of the spring), but, anyway, the bees do not clear out, and I have burnt the thing as useless. — HENRY ROUSWELL, Dorset, August 16.

REPLY.—We have never known any special difference between single and double walled hives so far as regards the use of "super clearers." The actual "bee-escape" itself is only one part of the appliance, and if the board—in which the "Porter" is fitted—be made of proper size, it should work the same on both types of hive. Had the "clearer" been sent for our inspection, along with dimensions of the hive above top-bars, we rather think there would have been no need for your burning it.

[3877.] *Bees Carrying Down Contents of Sections.*—I should much like your advice on the following matter:—On July 25 I opened one of my hives, which was expected to be full of honey, as it had not been disturbed since two racks of sections were put on early in June last. I found the lower rack with eighteen sections filled and sealed up with first-class honey. Before removing the latter I got the assistance of one of my men who knows a little about bees, and we again opened the hive and took off the top rack, which had not been touched at all by the bees, and then removed the bottom rack of honey, and set the empty rack in its place next to tops of frames. The full one was then placed on top of that with a "super-clearer" between. This done, I found, to my annoyance, that I could not replace the "lift," owing to the "clearer" being a bit too large. I therefore only replaced the hive-roof, but forgot, in my hurry, to put the quilts, etc., on top of the section racks before I left it. Owing to a rush of work since then (having commenced harvest), I was unable to get a chance of taking the honey till July 31, when, on opening the hive, I found, to my great disappointment, that the bees had broken the cappings of every cell in the sections and completely emptied them of honey, not a drain left in any one section. I therefore ask:—1. What ought I to have done in the first instance to prevent this? The hive is one of four stocks that I purchased in the early spring from a bee-keeping friend of mine. 2. Is it too late to drive bees out of a skep and hive up? If not too late, tell me what to do in that case. I enclose name and sign myself — DISAPPOINTED, Essex.

REPLY. — 1. The proper course would have been to take away the unused sections and set the super-clearer direct on top-bars of brood-chamber, until such time as the bees had left the sections and gone below. As it was, we cannot quite make out how a super-clearer—too large to allow the "lift" to pass over it—could work properly when set on top of a small rack holding only eighteen sections. It seems to us as if there could be no passage-way between the two racks of sections, seeing that the strip of wood round the edge of clearer on the underside would lie beyond the section tops. Can you clear up this point? Are

you sure the bees did not get at the filled sections from the outside? 2. Your second query is rather too vague for us to frame a safe reply. If by "hive up" you mean build up into a stock in a frame-hive, the present time is the most suitable for operating.

[3878.] *Suspected Robbing.*—A few days ago I was asked to look at some bees, the owner of which thought they were being robbed. On my arrival I found no robbing going on, but there was about a quart of bees dead and dying on the ground. Some bees were crawling down the alighting-board, and falling over, crawled slowly about the ground, and then seemed quite helpless, and remained so until they died. Other bees (some still just alive, some dead) were being dragged out of the hive by the active bees and dropped over on the ground amongst the dead and dying ones. Inside, the hive is crowded with bees on eight frames, seven of which are almost filled with brood. On lifting the frames out, some bees fell from the combs to the ground in the same helpless condition as the first mentioned. The stock is an Italian one, headed by a young and prolific queen, imported direct from Italy in June last. The owner says that the bees have been in this condition for two or three weeks. 1. Is this a case of bee-paralysis, described in B.J. several times lately, or what is it? 2. I enclose a sample of the dead bees; you will notice that some are quite differently marked from others, having a band of yellow, the rest of the abdomen being black, the others having several bands of yellow. Why is there all this difference? I have given the bees plenty of ventilation, and those bees which are able are hard at work on the heather. Name, etc., sent for reference—WESTBANK, Hants, August 15.

REPLY.—1. Judging by the five worker bees sent, it is not a case of bee-paralysis at all. Three of the five bees are quite black and shiny, all pubescence—or hairiness—being gone from the abdomen, just as when robber bees have been roughly mauled by their victims. It is possible that the bees have been fighting among themselves, as they do on rare occasions. 2. The two dead bees in normal condition are what we should call leather-coloured Italians; the rest are unrecognisable, for the reasons stated.

[3879.] *Stocks Found Queenless After Swarming.*—I have a hive that swarmed on July 9, and a second swarm followed nine days later. I returned the latter on same evening. I did not look for the queen, but the bees ran in splendidly, and seemed to be doing well for a few days afterwards. I examined the hive on August 22, and, to my amazement, found the supers deserted. I then examined the brood-chamber and find there is no brood, and about one-half of the bees are drones. 1. Kindly say whether I should have destroyed the queen-cells—if any—when returning the second swarm? 2. Do you think the swarm came out again after being returned and flew off unseen? 3. Being without brood six weeks after swarming do you think the hive is now queenless? 4. Will last year's honey, which has fermented, do for feeding bees with now? I will be much obliged if you will advise me on these points. I enclose my name and sign — ARDRUADH, Argyllshire, August 23.

REPLY.—1. Yes. 2. It is more than probable that this has happened. 3. It is certain that the hive is now queenless. 4. If thinned down with hot water and boiled for a few minutes, then skimming off the surface-froth, it may do for bee-food, but it will be more safe if used only for spring-feeding.

[3880.] *Air Bubbles in Honey.*—Would you kindly answer the following in next issue of B.B.J.? In drawing off honey from the "ripener," that filling the last few jars shows always, in my case, a lot of minute air bubbles. By allowing the jars to remain without caps for a few days, some of these bubbles disappear, and the remainder are skimmed off. But there are a quantity which lodge under the neck of the jar and cannot be removed. Will it affect the honey in any way if the jar is screwed down with these remaining in? 2. I have removed all my supers, and some of these are only partially filled with honey—sealed and unsealed. Is it advisable to extract this honey in the ordinary way without risk of its fermenting, or would you advise the sections being kept and given to the bees in the spring when supering the hives again? This is my best season with bees since I started in 1902 with seven stocks—rather too many, no doubt, for a beginner—but I have 15 hives now, and one has yielded over 100lb. of surplus honey this season, which is my "record take." I am having great trouble with robbing. One hive has been cleared right out, not a bee remaining. I am trying, by the aid of a carbolic cloth over the entrance, to arrest the destruction of another colony. Your reply to the above queries will be greatly esteemed. — SIDMOUTH, Devon, August 26.

REPLY.—1. The only ill-effect will be the objectionable frothy substance requiring removal before use. The remedy is to skim it off before screwing the caps on jars. 2. The risk of fermentation cannot be got rid of otherwise than by warming the honey till the superfluous moisture evaporates. Fermented honey is suitable

for bees as food, and unsealed honey left in sections will granulate in winter. It should, therefore, be given to the bees now—if at all—and let them seal it over in the brood-chamber.

[3881.] *Honey from the Giant Thistle.*—Kindly say in B.B.J. what you think of the enclosed honey sample. I have a large quantity of it, one hive alone yielding 117 lb., and an artificial swarm 50 lb. But I do not find the characteristic honey-flavour with it. I suppose it is principally collected from the limes. There is at present a crop of an acre of giant thistle (4 ft. high) close by, and bees are at work on it in thousands. Are they getting honey or pollen only? — W. J. S., Chiswick, August 23.

REPLY.—Honey is very good in colour, but the distinctive flavour of lime honey is not perceptible in sample. This is no doubt owing to the proximity of giant thistle, which yields honey and pollen in about equal parts.

[3882.] *Building-up Stocks from Driven Bees.*—I am anxious to enlarge my apiary, and have no drawn-out combs in hand. May I therefore ask:—1. If I buy some driven bees, would they build-out combs from frames of foundation if fed well and kept very warm? 2. I have a swarm which was hived on July 4, and though the bees have been fed ever since, they have not yet drawn-out the combs properly. They are on seven frames, and the combs are only built about two-thirds across the frames. Can you account for this? 3. I have also another swarm hived one week earlier, and from this I have taken off forty-two 1-lb. sections, and hope to take twenty-one more. I might here say the two hives mentioned are located six miles apart; but it seems strange that one should do so well and the other one do nothing. I examined the last-named one on August 19 and found brood in all stages on six combs out of seven. A reply in next issue will oblige, as I am anxious to purchase some driven lots. Name sent for reference.—W. H. R., Sussex, August 24.

REPLY.—1. If a strong lot (say, 3 or 4 lb.) of bees are got, they will be quite likely to build-up into a strong stock if well fed and cared for. 2. There must have been very little bee-forage about if the bees did so badly in comb-building although fed, but July swarms seldom do much the first year after hiving. 3. We can only explain the difference by a comparison of the two localities for bee-keeping. One must be very good, the other very poor.

[3883.] *Earwigs in Hives.*—I am troubled with earwigs in my frame-hives. Can you tell me if they will do any harm, and why they take up their abode in the hives, and for what reason? Also, can you suggest a remedy, or how to destroy them, or else keep them out? Kindly reply in the B.B.J., and oblige—W. S., Suffolk, August 21.

REPLY.—Earwigs do no harm beyond creating more or less of the uncleanliness that comes of rearing a large family of little "wigs." They choose warm, shady places as their home, and beneath a hive-roof, or under the plinths, suits them very well. To get rid of them some bee-men brush them off into hot water when found in big families. To keep them out the iron "leg-cups" used for protection against ants answer very well.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

September 2 at Knutsford.—Annual Show of the Mid-Cheshire Farmers' Association. Six classes for Honey and Wax. **Entries closed.**

September 2, at Bramhall, in the grounds of Bramhall Hall.—Bramhall and Woodford 16th Annual Show. Three open classes for honey and wax; four to district; C.B.K.A. medal offered. Prizes 15s., 10s., 7s. 6d., 5s., 3s., 2s. Schedules from John Sibson, Hon. Sec., Hawthorn Grove, Bramhall, Stockport.

September 2 to 9, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders Annual Exhibition and Market. **Open to all British Beekeepers.** Entry fee in each class one shilling. Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section, with free entry. Liberal money prizes in all classes. Also gold and silver medals and two silver cups, along with valuable money prizes, Open to members only. Schedules from J. Johnstone, Secretary, Nelson Street, Maxwelltown, Dumfries. **Entries close September 2.**

September 12, at Woodstock.—Honey Show of the Oxfordshire B.K.A., in connection with the Woodstock Agricultural Show. Open Classes (with free entry) for single 1-lb. section and single 1-lb jar extracted honey. Prizes, 10s., 5s., and 2s. 6d. in each class. Schedules from H. M. Turner, 4, Turl Street, Oxford.

September 13, 14, and 15, in Waverley Market, Edinburgh, along with Great International Flower Show. Four open classes for Sixes, Sections, and Bottles of Flower and Heather respectively, with prizes of 15s., 10s., 5s., and 2s. 6d., for an entry fee of 2s. each class. Schedules now ready from W Weir, Secretary, Heriot, Midlothian.

September 14, at Castle Douglas. — Honey Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb. jars, three sections, and class for single 1-lb. jar and single section. **Entries close September 2.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 27, at Altrincham.—Annual Show of the Altrincham Agricultural Society. Good Money Prizes for Honey, along with Silver and Bronze Medals of the Cheshire B.K.A., and others. Open Class for Frame-Hive (unpainted). Schedules from J. Herbert Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 3 to 5, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover Square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

H. M. (Wallingford).—Queens for Breeding From.—It would no doubt be worth while to try one of the special queens named, even if your "home-reared ones" are satisfactory. A change of blood is often advantageous. Glad to hear your honey-crop is so satisfactory this year.

An Inquirer (Bridge of Allan).—We advise you to boil the sugar for a few minutes in syrup-making particularly for winter bee-food. Boiling may not be so important for spring feeding, but it is in autumn.

L. A. S. (Bordesley, Birmingham).—Starting Bee-keeping in Towns.—1. A twenty minutes' cycle ride from the vicarage is rather far from any pasturage, though bees would reach it. 2. In May; price about 12s. 6d. 3. The common brown will be best to start with. 4. Some reader near Birmingham might say if the district is good. 5. "Driven bees" are those taken from skeps in autumn.

J. Reeves (Coventry).—Swiss Bee-keeping.—1. We have not seen the article you refer to, so cannot say anything about it. 2. We have had more than one article on "Honey as Food" in former issues, but they are now out of print.

A. K. S. (Weymouth).—Sending Sections by Parcel Post.—1. Your sample section reached us smashed in post, and honey running out. It is of no use to put "this side up" on parcels. The honey seems good in quality from what we could gather, and is from clover. Other queries will be replied to in full next week.

Honey Samples.

G. C. (Horsham).—No. 2 is best in flavour, though not equal in colour to No. 1. Neither sample, however, is of good quality for table use.

Apis (Ayrshire).—Honey is very good on all points, and fit for any show-bench.

E. C. (Cornwall).—Sample very good indeed, quite suitable for showing. It is from mixed sources, mainly clover.

Anxious Bee-keeper (Portsmouth). — There is not much to choose between the two samples. Both are good, and for colour No. 2 is a shade darker than No. 1, probably from the hive being located in the centre of town. The latter is, however, rather better in flavour.

W. C. (Grange-over-Sands).—Except for its lacking a little in density, your sample is very good indeed.

F. Higgin (Neath). — A very excellent sample, good on all points.

Suspected Comb.

M. P. (Enfield).—No disease in comb. The few sealed cells contain only dried-up chilled brood.

******* ***Some Queries and Replies, &c., are unavoidably held over till next week.***

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

DRIVEN BEES, with Queen, 5s., 6s. Stock Queens, 2s. 6d.—WOODS, Normandy, Guildford. K 21

HEALTHY DRIVEN BEES supplied at once, with Fertile Queen, 3s. 6d. per lot.—SOLE, Expert, Potton, Sandy. K 22

15 LOTS of Healthy Driven Bees. What offers?—J. THOMAS SOLE, 133, Sturton Street, Cambridge. K 23

RAPID FEEDERS, for Driven Bees, 3s. 6d., post free. Honey Tins, for safe transit, simple and secure: 7lb. tins, 5s. per dozen. Sample, 8d., post free.—GREENHILL, Graham Road, Wimbledon.

THREE SHALLOW FRAME SHOW CASES (new); exchange for Driven Bees.—RICHARDS, 27, Cambridge Street, Plymouth. K 20

HONEY.—Splendid Extracted, mainly from clover; few cwts. Sample sent.—CLEAR, Sherpeth, near Royston, Cambs. K 19

STRONG HEALTHY STOCKS, in well-made hives. 25s. each.—S. COOK, Ford Apiary, Ashford, Middlesex. K 17

Editorial, Notices, &c.

THE CONFECTIONERS AND ALLIED TRADES' EXHIBITION.

HONEY SHOW AT THE AGRICULTURAL HALL.

The thirteenth annual International Exhibition and Market of the Confectioners and Allied Trades commenced on September 2 at the above hall, and remains open till the close of the present week.

Owing to the increased demand for space this year, the honey competitions were perforce relegated to the North Gallery Annexe, and thus had less prominence than in 1904. The change, however, gave those specially interested in the display of honey and bee products a better opportunity for examining the exhibits than in crowded avenues below.

We hoped to have seen a larger number of exhibits, in view of the trifling sum charged for each entry and the very liberal money-prizes offered for competition; but bee-keepers are a bit curious in some respects, and certainly do not appear to show much appreciation of efforts—however praiseworthy—made in the endeavour to bring about a large and good display of bee-produce on the show-bench.

In the Trophy class four money-prizes—amounting to the sum of £10—were offered, and five trophies were staged; and, seeing that each of the five exhibits received awards, the competition could not be called keen. The prizes, however, were well earned, and we congratulate the respective exhibitors on their enterprise. They came from London, Lancashire, Hunts, Oxon, and Notts, so that the five prizes went to five counties. The first and second were given to displays quite different in style Messrs. Lee and Son's, which took first honours, being composed of excellent materials put up in saleable form. It was a practical bee-man's exhibit of bee-produce, with a miniature frame-hive in front to show that the honey was obtained by modern methods.

Mr. Dell's second-prize trophy was a very attractive and handsome display for a tradesman's window, and in this way filled the conditions of schedule admirably, but some of the honey in jars was too elaborately got up for ordinary sale purposes. However, as there was no lack of the usual jars on the stand, the slight fault mentioned was not an important one. All the other trophies were good, Mr. Brown's especially so.

The other classes were well represented, many very excellent samples being staged, both of comb and extracted honey. In the latter class the task of finding the best, with so little to choose between so many of them, was no light one. For medium-coloured honey also some very good samples were shown, far better than usual, and the dark honey was very fair indeed. Beeswax, too, was well represented, some beautiful samples being staged. It might be well, however, for exhibitors in this class to note that for wax in cakes "suitable for the retail counter trade" quality of wax does not count, so long as it is of fair commercial quality.

Mr. W. Broughton Carr, London, and Mr. T. I. Weston, Hook, Winchfield, officiated as judges, and made the following

AWARDS.

Display of Honey (comb and extracted) and Honey Products, shown in suitably attractive form for a tradesman's window (5 entries). 1st (£4 and B.B.K.A. Silver Medal), Jas. Lee and Son, 4, Martineau Road, London, N.; 2nd (£3), A. S. Dell, Leigh, Lancs; 3rd (£2), R. Brown, Somersham, Hunts; 4th (£1), T. Marshall, Sutton-on-Trent, and H. W. Seymour, Henley-on-Thames (equal).

Twelve 1-lb. Sections (22 entries).—1st (£1 10s. and Bronze Medal), A. Weatherhogg, Willoughton, Lincs; 2nd (£1), J. Clay, Wellington, Salop; 3rd (10s.), W. Woodley, Beedon, Newbury; 4th (5s.), Jas. Lee and Son; 5th (2s. 6d.), E. C. R. White, Newton Toney, Salisbury; v.h.c., R. Brown; h.c., W. Hedges, Bishops Waltham, Hants.

Twelve 1-lb. Heather Sections (3 entries).—2nd, T. Richards, Church Greasley, Burton-on-Trent. (No 1st awarded.)

Three Shallow Frames Comb Honey for Extracting (9 entries).—1st (£1 5s.), E. C. R. White; 2nd (£1), J. Boyes, Bridge Street, Cardiff; 3rd (15s.), Lee and Son; 4th (10s.), J. Adams, West Haddon, Rugby; v.h.c., R. Brown.

Twelve 1-lb. Jars Light-coloured Extracted Honey (35 entries). 1st (£1 15s. and B.B.K.A. Certificate), J. Boyes; 2nd (£1 5s.), Lee and Son; 3rd (15s.), C. Hood, Bridge End, Glam; 4th (10s.), W. Fake, Great Massingham, King's Lynn; 5th (5s.), W. Drowery, Utterby, Louth; v.h.c., R. Morgan, Apiary, Cowbridge; v.h.c., E. Sopp, Crowmarsh, Wallingford; v.h.c., J. Faby, Patrick St. Kilkenny; h.c., A. Weatherhogg; h.c., L. Quayle, Glenmay, Isle of Man.

Twelve 1-lb. Jars Medium-coloured Extracted Honey (27 entries).—1st (£1 5s.), E. C. R. White; 2nd (£1), W. Cowans, Rothbury, Northumberland; 3rd (15s.), Lee and Son; 4th (10s.), T. Marshall; c., A. Barber, Comberton, Cambs.

Twelve 1-lb. Jars Dark-coloured Extracted Honey (11 entries).—1st (£1), E. C. R. White; 2nd (15s.), W. Sproston,

Shugborough, Great Heywood, Staffs; 3rd (10s.), Lee and Son; v.h.c., H. W. Seymour.

Twelve 1-lb. Jars Heather Honey (5 entries. — 1st (£1), H. Berry, Llanrwst, N. Wales; 2nd (15s.), F. Upton, Rugeley, Staffs; 3rd (10s.), W. Sproston.

Twelve 1-lb. Jars Granulated Honey (6 entries).—1st (£1 5s.), H. W. Seymour; 2nd (£1), Lee and Son; 3rd (15s.), R. Brown; 4th (10s.), J. Boyes.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Package, suitable for retail counter trade (10 entries).—1st (£1), Lee and Son; 2nd (15s.), C. W. Dyer, Compton Crossing, Newbury; 3rd (10s.), E. C. R. White; 4th (5s.), H. W. Seymour.

Beeswax, judged for quality of wax only (11 entries).—1st (£1), Mrs. Harris, High Ferry, Sibsey, Lincs; 2nd (15s.), H. W. Seymour; 3rd (10s.), J. Clay; 4th (5s.), E. C. R. White; v.h.c., W. Bowes, Elmhurst, Darlington, and C. Dunn-Gardner, Fordham Abbey, Cambs.

HENBURY DISTRICT B.K.A.

ANNUAL SHOW.

The seventh annual show of the above association was held on August 2 at Henbury, in connection with that of the Horticultural Society, and was favoured with good weather. This was the largest show of honey the B.K.A. has ever had, and the quality of the exhibits was above the average. Over 600 1-lb. jars and sections were staged, the total entries numbering 125.

Messrs. Brown and Jordan again officiated as judges, and made the following awards:—

OPEN CLASSES.

Trophy of Honey.—1st, Mrs. Waller, Westbury-on-Trym.

Twelve 1-lb. Sections.—1st, Wm. Woodley, Newbury; 2nd, James Coates, Bath; 3rd, E. C. R. White, Newton Toney; v.h.c., F. C. Pullin, Warminster; h.c., Messrs. E. L. and H. C. Jones, Andover.

Twelve 1-lb. Jars Extracted Honey.—1st, Wm. Woodley; 2nd, J. Boyes, Cardiff; 3rd, R. Morgan, Cowbridge; v.h.c., H. Aleck Shore, Frome; h.c., F. W. Hunt, Tipton St. John.

Single 1-lb. Section.—1st, A. V. Trebble, South Molton; 2nd, James Coates; 3rd, F. C. Pullin; h.c., Miss M. P. Simon, Bath; c., Charles Pike, Henbury.

Single 1-lb. Jar Extracted Honey.—1st, Miss Edwards, Stamford; 2nd, F. C. Pullin; 3rd, E. C. R. White; v.h.c. James Coates; h.c., A. V. Trebble.

Beeswax.—1st, E. C. R. White; 2nd, Mrs. Waller; 3rd, Arthur Baker, Henbury; v.h.c., Herbert Jolly, Clifton.

Queen Wasps. — 1st, — Castell, Henbury; 2nd, T. Dinham, Henbury; 3rd, — Gay, Henbury.

MEMBERS ONLY.

Twelve 1-lb. Sections.—1st, Herbert Jolly, Clifton; 2nd, Arthur Baker, Henbury; 3rd, E. Hutton, Henbury.

Twelve 1-lb. Jars Extracted Honey.—1st, T. George, Henbury; 2nd, Mrs. Waller; 3rd, E. Hutton; h.c., S. Tryon, Henbury.

Six 1-lb. Sections.—1st, Mrs. Todd, Westbury-on-Trym; 2nd, Charles Pike, Henbury; 3rd, Herbert Jolly; v.h.c., Mrs. Waller; h.c., Arthur Baker; c., E. Hutton, Henbury.

Six 1-lb. Jars Extracted Honey. — 1st, T. George, Henbury; 2nd, Arthur Baker; 3rd, Mrs. Waller; h.c., Mrs. Todd; c., Herbert Jolly.

Three Shallow-frames Comb Honey.—1st, T. George; 2nd, S. Tryon; 3rd, Mrs. Hignell, Henbury; c., Herbert Jolly.

Three 1-lb. Sections.—1st, Charles Pike; 2nd, T. George; 3rd, Mrs. Waller; h.c., Herbert Jolly; c., Arthur Baker.

Three 1-lb. Jars Extracted Honey.—1st, T. George; 2nd, Arthur Baker; 3rd, E. Hutton: h.c., Mrs. Todd; c., Mrs. Waller.

COTTAGERS ONLY.

Three 1-lb. Jars Extracted Honey.—1st, T. George; 2nd, Mrs. Stagg, Henbury.

Three 1-lb. Sections. — 1st, T. George; 2nd, Mrs. Stagg.

NOVICES ONLY.

Three 1-lb. Jars Extracted Honey.—1st, Miss Lavington, Stoke Bishop; 2nd, S. Tryon; 3rd, Miss Codrington, Westbury-on-Trym.

Three 1-lb. Sections.—1st, Miss Lavington; 2nd, S. Tryon; 3rd, Miss Codrington.

SPECIAL PRIZES.

Silver Medal.—T. George (35 points).

Bronze Medal.—Mrs. Waller (19 points).

J. Atkin Waller, Hon. Sec.

YETMINSTER DISTRICT B.K.A.

ANNUAL SHOW.

The Yetminster District Bee-keepers' Association held their annual show in St. Mary Mead (by permission of the Rev. Gordon Wickham, hon. treasurer), at Bradford Abbas, on August 23.

The number of entries compared very favourably with previous years, and the show was an all-round excellent one, the honey, of which 600 lb. was exhibited, being of excellent quality, good colour, and well staged.

Mr. Stacey (Merriott) and Mr. W. Boalch (Yeovil) judged the exhibits, and made the following awards:—

MEMBERS' CLASSES.

Standard Frame of Comb Honey.—1st, T. Bishop, Bradford Abbas; 2nd, G. Leeding, Bradford Abbas; 3rd, F. Trott.

Shallow-frame of Comb Honey. — 1st, W. Pomeroy, Bradford Abbas; 2nd, G. Leeding; 3rd, F. Trott.

Six 1-lb. Sections.—1st, F. Trott; 2nd, Miss Ffooks, Totnell; 3rd, G. Leeding.

Bell Glass (over 10 lb.).—1st, T. Bishop; 2nd, G. Leeding; 3rd, E. Higgins.

Bell Glass (under 10 lb.).—1st, G. Leeding; 2nd, T. Bishop; 3rd, C. Smith, Wyke.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, G. Leeding; 2nd, W. Pomeroy; 3rd, T. Bishop.

Six 1-lb. Jars (Light) Extracted Honey.—1st, Miss Ffooks; 2nd, G. Leeding; 3rd, C. Smith; 4th, F. Trott.

Beeswax. — 1st, G. Leeding; 2nd, C. Smith; 3rd, F. Trott.

Honey Trophy.—W. Pomeroy.

Champion Collection of Honey and Wax.—1st, G. Leeding; 2nd, T. Bishop.

OPEN CLASSES.

Three 1-lb. Jars Extracted Honey.—1st, T. G. Hillier, Andover; 2nd, W. F. Fake, Gt. Massingham.

Three 1-lb. Sections.—1st, E. C. R. White, Newton Toney; 2nd, W. F. Fake.

Three 2-lb. Sections (Tilley's Patent). — 1st, T. Bishop.

Tilley's Patent Sections and Honeycomb Receptacles.—1st, T. Bishop.

One 2-lb. Section (Tilley's Patent).—1st, T. Bishop; 2nd, G. Leeding; 3rd, Rev. Gordon Wickham, Bradford Abbas.

Collection of Bee Flowers.—1st, Miss H. Leeding; 2nd, Miss B. Bishop.—G. LEEDING, Hon. Sec.

DERBYSHIRE B.K.A.

ANNUAL SHOW.

The twenty-fourth annual show of the D.B.K.A. was held at Osmaston Park, Derby, on August 30 and 31. The weather was threatening on the first day, but the second was all that could be desired, and the attendance increased very much in consequence. It was much regretted that the section classes were so poorly patronised, there being but three entries in the members' class for twelve sections, four in the novices' class, and two in the open class for twelve sections, both of which were from members.

Mr. W. Herrod lectured at intervals in the bee-tent on both days, securing crowded audiences on each occasion. He also officiated as judge of the bee and honey department, and made the following awards:—

MEMBERS' CLASSES.

Observatory Hive (single frame) with Bees and Queen.—1st (15s.), C. Spencer, Ashleyhay; 2nd (10s.), A. H. Dawson, Burton; 3rd (5s.), J. Stone.

Observatory Hive with Bees and Queen.—1st (15s.), J. Bakewell, Burton; 2nd (10s.), C. Spencer; 3rd (5s.), J. Martin, Crewton.

Trophy of Honey in any Form. — 1st (challenge cup and 10s.), J. Pearman, Derby; 2nd (7s. 6d. and silver medal D.B.K.A.), S. Durose; 3rd (7s. 6d. and bronze medal D.B.K.A.), C. Spencer.

Twelve 1-lb. Sections. — 1st (10s. 6d. or silver medal D.B.K.A.), J. Pearman; 2nd (7s. 6d.), J. Stone; 3rd (5s.), T. Richards.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st (10s. 6d. or silver medal D.B.K.A.), J. Stone, Cubley; 2nd (7s. 6d), J. Pearman; 3rd (5s.), S. Durose; v.h.c., J. Amatt.

Twelve 1-lb. Jars (Dark) Extracted Honey.—1st (10s. 6d. or silver medal D.B.K.A.), S. Durose, Burton; 2nd (7s. 6d.), G. Richards, Willington; 3rd (5s.), A. H. Dawson; v.h.c., G. Allen.

Six 1-lb. Sections. — 1st (7s. 6d.), T. Roberts, Cubley; 2nd (5s.), F. Thompson, Burton.

Six 1-lb. Jars Extracted Honey. — 1st (7s. 6d.), W. H. Bird, Stapenhill; 2nd (5s.), T. Roberts; 3rd (2s. 6d.), C. H. Roe, Burton; v.h.c., G. Smith.

Beeswax.—1st (7s. 6d), J. Pearman; 2nd (5s.), J. Stone; 3rd (2s. 6d.), W. H. Bird.

Six 1-lb. Jars Granulated Honey.—1st (7s. 6d.), J. Pearman; 2nd (5s.), — Moncrief, Allenton; 3rd (2s. 6d.), S. Durose.

Six 1-lb. Jars Heather Honey (county only).—1st (7s. 6d.), J. Pearman. (One entry only.)

OPEN CLASSES.

Twelve 1-lb. Sections.— 1st (5s. and silver medal D.B.K.A. or 15s.), J. Stone; 2nd (10s.), T. Richards, Ch. Gresley.

Twelve 1-lb. Jars Extracted Honey. — 1st (5s. and silver medal D.B.K.A., or 15s.), T. S. Houldsworth, Kirton Lindsey; 2nd (10s.), F. Powers, Andover; 3rd (5s.), Jno. Berry, Llanrwst; 4th (2s. 6d.), T. G. Hillier, Tarant; v.h.c., T. Duckmanton; h.c., W. H. Bird; c., J. Pearman.

Twelve 1-lb. Jars Granulated Honey. — 1st (15s., or silver medal D.B.K.A. and 5s.), J. Pearman; 2nd (10s.), W. H. Bird; 3rd (5s.), T. S. Holdsworth; h.c., S. Durose.

Collection of Appliances. — No entry. — R. H. COLTMAN, Hon. Sec.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[6001.] The summer is fast passing away and the period of work in the apiary should now be drawing to a close. Re-queening, where necessary, ought to be completed in all early or flower-honey districts; feeding-up, if required, should also be got through

by the first or second week in September. Syrup-food given rapidly now will be capped over and thus become equal to nectar gathered from the flowers for keeping the bees in good health during the winter months. It is also advantageous if hive entrances are reduced to an inch in width. This prevents wasps from entering unnoticed by the bees, and also helps the bees to protect their stores from robbers.

Wax-moths are often a great pest to the bee-keeper when they once get into a district. Every weak stock in which they secure a footing becomes a prey to these marauders, for the bees are powerless to dislodge them and the whole of the brood-nest in a short time becomes full of cocoons containing the moth-larvæ. When this condition is reached, the only cure is to burn the lot! A neighbour, located about five miles away from me, has had four stocks of bees completely spoiled by this pest, so that if not troubled with foul brood we have our losses from another pest, second only to foul brood among bees. For myself, I am ever on the alert for this enemy, and destroy every moth and cocoon I find all through the year, especially in the summer time. But notwithstanding my watchfulness, they are still about the apiary, and ever ready to gain admission to a hive wherever possible.

Price of Honey. — Now the question arises—What of the harvest of 1905? Are our honey-producers striving to procure a fair price for their produce? I think not. From what I hear, many of them are just taking what the retailer thinks fit to offer. Anyway, those of us who name a price fairly remunerative to the craft are sometimes told that our customers "have had honey offered below your quotations." No wonder our brethren on the other side of the Atlantic have ever blamed the small honey-producer, from the very cause I am now writing about—*i.e.*, producing a few sections or jars of honey, and by taking a low price to clear. This means ruin to the honey-trade for those who get their bread and cheese from bee-keeping. Not only is this true of our particular line of business, but in other things also; the small producer, through want of business aptitude, often brings the price in his particular line below the point of profitable production. This course cannot be good for anyone or for anything.

Re-queening for Winter.— If any stocks are found queenless on packing up for winter, do not think that a fresh queen only is going to retrieve the colony, and build it up to sufficient strength to live through the winter. It will be practically throwing money away to invest it in a good queen, and will give neither the purchaser nor the seller any satisfaction. On the other hand, a small colony or nucleus added to a queenless hive may put it in good trim to stand the winter, and prove a useful stock another year. — W. Woodley, Beedon, Newbury.

BRITISH BEE-GOODS IN S. AFRICA.

[6002.] Noticing in your valuable journal of June 15 (No. 5915) a copy of a letter which has been written by Mr. Hugh M. Meyler, Utrecht, Natal, for insertion in the *Natal Agricultural Journal* on "British Bee-goods in S. Africa," I beg to enclose copy of a letter forwarded for insertion in that journal in answer to Mr. Meyler's letter, and have also sent a copy to Mr. Meyler, giving reasons for my preference of the British "standard-frame" hive.

I should esteem it a favour if you would publish the following correspondence in your journal. — Your obedient servant, Frederick Sworder, Johannesburg, S. Africa, July 12.

To Hugh M. Meyler, Esq., Utrecht, Natal.

Dear Sir,—In reply to your letter appearing in the *Natal Agricultural Journal*, which was also published in the British Bee Journal of June 15 last, regarding the adoption of a "standard frame," etc., for Natal, I would like to point out that this subject opens an important question, more especially as bee-keeping on up-to-date principles in South Africa may as yet be said to be only in its infancy. Having had the opportunity, since the cessation of hostilities, of handling some hundreds of stocks of bees in both American (Hoffmann) frame-hives and "British" standard-frame hives, I have come to the conclusion that I certainly prefer the "British."

Appended are my reasons:—

(1) As the American frame is 4 in. longer than the "British," and, in order to stand the extra weight of comb, honey, hatching, and adhering bees, it becomes necessary to make it of increased depth, this arrangement I consider detrimental to storing honey in the super. (2) In the "British" frame, even when fitted with "W.B.C." ends, there is a decidedly better grip for the thumb and finger at ends of the top-bar, as this length is $\frac{7}{8}$ in., in comparison with the $\frac{3}{4}$ in. in the American frame. (3) There is a greater tendency for African bees to build brace or bridge combs on American frames in comparison with the "British." (4) Although the system of fastening the comb foundation in either kind of frame is different, the time taken to fix it in the "British" is considerably quicker and equally effective. There is also less liability during this operation of

straining or "buckling" in the "British" frame. (5) Wiring has been found to be essential in this country, and, whichever style is adopted, it naturally takes more wire in American frames than "British." (6) Ants in this country are found to be troublesome. No provision is made to guard against this inconvenience with American hives, whereas legs to stand in tins of oil can be—and usually are—fitted to "British" hives. (7) In American frames—at points where the ends of each frame touch one another—it is possible for bees to propolise 3 in.; whereas in the "British" frame $\frac{3}{8}$ in. on the "tin end" only is possible. (8) By sliding back every alternate "W.B.C." end on the "British" frame, the distance apart of each frame can be varied to suit circumstances, whereas in the American frame this cannot be accomplished. (9) American hive super-crates contain at least 24 1-lb. sections, and in some cases more; this number in many districts is considered to be too large a space to give the bees at once, "British" section-racks only holding twenty-one sections. (10) American hive super-crates rest flush on brood-chamber; no provision is made for keeping out the rain, whereas for this purpose "British" hives are fitted with fillets. (11) When the section-rack or super in the "British" is placed in the lift, there is a $\frac{1}{2}$ in. space all round in single-walled hives; and in double-walled hives, besides the $\frac{1}{2}$ in. space at ends, there is a 2 in. space at sides. Thus provision is made for any warm materials required in order to equalise the temperature of the section-rack. No means are provided for inserting these warm materials in the American hives. (12) In "British" hive-roof construction there is at least a space of $3\frac{1}{4}$ in. between the top of section-rack and the highest inner part of ridge, whereas in American hives this space is considerably less. This reduced area has proved to be an objection owing to the day and night variations in temperature. — Yours faithfully, FREDERICK SWORDER, Raine's Buildings, Government Square, Johannesburg.

LEADING THE WAY.

[6003.] Mother England is being left behind by her Colonies. The New Zealand Department of Agriculture has appointed Mr. Isaac Hopkins, of Matamata, Auckland, as Government Apiarist. This gentleman, a bee-keeper of old standing, formerly editor of the *New Zealand and Australian Bee Journal*, and author of an excellent book of instruction (of which the fourth edition appeared last year under the title of "The Australasian Bee Manual"), has been making tours amongst the bee-keepers of the colony. The department is issuing a bulletin to report progress, and a Foul Brood Act has already been drafted, and will be introduced during the present Parliamentary Session. Of this I hope shortly to be able to supply particulars.—H. J. O. WALKER, Lieut.-Col., Leeford, Budleigh Salterton.

ARTIFICIAL SWARMING.

[6004.] Referring to query No. 3846 in B.B.J. of August 10 (page 315), your reply to "R. D. G." reads thus:—"Your method of making an artificial swarm is wrong. No excluder is used in the process, as described in 'Guide Book.'" May I point out that "R. D. G." is evidently following Mr. Alexander's plan, as reported by me (page 203 of the B.B.J. of May 25), which is now being generally used in the United States? This plan is followed by most bee-keepers in America having large apiaries, for the reason that it is little trouble, and whether you wish to increase by dividing after ten or eleven days, or to build up a strong colony to obtain all the advantages of a short honey flow.

In *Gleanings* of August 15, Mr. Bearden says:—"I have been reading *Gleanings* for a short time only, but I have not seen anything therein that I think possesses as much value as the article on page 425, April 15, by Mr. E. W. Alexander. Now, what I consider the best thing in these manipulations is the fact that no brood is lost just at the very critical time, *i.e.*, before the honey-flow commences; and you will find that whenever all of the brood but one comb is placed above the excluding zinc, the queen seeing nothing but empty combs and bees in plenty to care for brood are at hand, that she will just get down to her work of multiplying, as far as her own home is concerned. Now, you can look at her combs on the fourth or fifth day after making a division of the brood-nest, or the excluding of the queen from her young bees in the larval form, and see how much more she has done at egg-laying than usual, and then you will believe also."

The above is only one of several articles, approving of this system, that have appeared in the different bee-papers here. The question of your correspondent "R. D. G.," which refers to excluders, is "How do you deal with the drones?" If he will read my article in B.B.J. of July 6 (page 264), he will see how the drones can be got rid of. Unless the excluder is used, the queen will not so readily leave the combs in the old hive, and will lay in the cells as the brood hatches out, instead of at once commencing in the lower hive, and thus leaving the upper for the storing of honey if division does not take place. If the upper hive is removed on the tenth or eleventh day, the confinement of the

drones that time will be of no importance. — JOHN M. HOOKER, Philadelphia, August 21.

P.S.—In the same number of *Gleanings* (August 15), there is an interesting article telling of what the United States Department of Agriculture is doing for bee-keeping in the fiscal year 1904-1905 the investigation of bee diseases, particularly foul brood, now devastating the apiaries in the State of New York. This list would be interesting to your readers if you could find room for it.—J. M. H.

[If not too long, we will be glad to have the article in question.—EDS.]

BEES IN NOTTS.

PRICE OF HONEY.

[6005.] The honey-crop here has not been so large as I expected this season, owing to the drought and prevailing rough winds. Although all my hives were crowded with bees on ten frames, only one has succeeded in filling the second super of shallow-frames, and even as late as now all is not sealed over. I have been interested in reading the letters dealing with the price of honey, and agree with your correspondent (5978, page 325) that selling at a low price to the retailer is likely to do serious harm to those who depend on bees for their living. The honey will keep, and there should be no great difficulty in storing it; therefore why not hold out for a fair price? I have never sold any for less than 6½d. per lb. in bulk, and 3s. per dozen for tie-over 1-lb. jars. At one shop where I sold a lot last year they say they have bought this year 1-lb. "screw-caps" at the same price as my tie-overs, and appeared to want mine for less. But I declined to take less, saying "It would keep, and I would go elsewhere." I am, in consequence, now selling at 9s. per dozen, and likely to continue at that price. Then there is that "Scotch honey"—deception, should I call it? In a shop window in Nottingham I notice 2-lb. tins Scotch honey for 1s. It is labelled, "Superfine (Scotch) Pure Honey," and on the margin is the legend, "This honey is of uniform quality and specially prepared for table use." Now I ask: — What preparation does pure honey require for any use? If they said it had been specially prepared to sell cheap, it might mean something—but so much for present-day smart-trading methods. Of course, we all have to "live," but I think among the bee-keeping fraternity we ought to make our motto, "Live and let live," and try to do something to keep out of our business methods such cut-throat competition as is too prevalent nowadays.

I was relieved to see your corrected reply referring to the use of excluders under shallow-frames, as I had been puzzling over the matter ever since previous reply appeared.

I enclose two samples of honey. Will you kindly say what you think of them? I enclose card and sign—BOOTS, Nottingham, August 23.

[Both samples are of excellent quality. —EDS.]

WEATHER REPORT.

WESTBOURNE, SUSSEX,
August, 1905.

Rainfall, 2·94 in.	Minimum on grass, 36° on 24th.
Heaviest fall, ·60 on 26th.	Frosty nights, 0.
Rain fell on 19 days.	Mean maximum, 67·7.
Above average, ·31 in.	Mean minimum, 52·7.
Sunshine, 177·7 hours.	Mean temperature, 60·2.
Brightest day, 10th, 11·6 hours.	Above average, ·2.
Sunless days, 0.	Maximum barometer, 30·29 on 31st.
Below average, 37 hours.	Minimum barometer, 29·35 on 29th.
Maximum temperature, 78° on 15th.	**L. B. BIRKETT.**
Minimum temperature, 38° on 24th.	

AUGUST RAINFALL.

Brilley, Herefordshire.

Total fall, 4.54 in.
Heaviest fall, .74 on 4th.
Rain fell on 21 days.

W. HEAD.

Queries and Replies.

[3884.] *Locating Hives Which Have Swarmed.*—I have three stocks of bees (A, B, and C), of which A and B were purchased in the years 1902 and 1904 respectively. On July 13 I had a very large swarm covering ten frames, which make up stock C. I did not see the swarm come off, as our bees are some distance away on an allotment, and thus I had no means of knowing from which stock the swarm came. A and B had each two racks of supers on, which were crowded with bees, and, being just off for the holidays, I did not examine them until August 24. Both stocks are crowded with bees, and in B there is a large quantity of sealed brood, whereas in A there is very little. There were queen-cells in both stocks. I therefore ask:—1. Are there any means of telling which stock threw the swarm? 2. Would it also be possible for stocks to be so thickly populated after sending out a large swarm besides yielding about 60 lb. of honey between them—stock B the

larger quantity? I have heard it rumoured that a bee-keeper who keeps a single hive a few gardens away now finds his stock very weak in bees. Would it be possible that it swarmed and located itself in our garden? If this were so, could he now claim the stock as his own legally? The unfortunate part of the matter is that I wished to requeen A this month; but, as I am uncertain as to the swarming, and as they seem to be so thickly populated, I ask:—3. Ought I to do so? The stock purchased in 1902, with a queen, I think, of the year previous, certainly suggests itself to me in any case. 4. Last year I found a stock I then had suffering from foul brood, whereupon I destroyed the lot of bees, brood-box and frames complete. I have since had the floor-board burned and scraped and scorched with a painter's lamp. If I paint with two or three coats of good paint, as well as painting outer-cases, inside and outside hive, would it be safe to use the hive (a "W. B. C.")? Also this same stock gave me a rack of sections last year which were only partly filled, thereby necessitating extraction. These empty sections I have retained, but not used this year. 5. Could I use them again with safety after fumigating with sulphur? 6. Should the queen-excluder used under the same sections be destroyed? Name enclosed for reference.—RUSTICATUS.

REPLY.—1. The presumption is that the swarm issued from A. 2. Quite possible. 3. Yes; but while not impossible, there is no need to trouble about possibilities in your case, because the neighbour could have no legal claim to the bees under the circumstances. 4. Yes, quite safe. 5. We should avoid risk by melting the combs in sections down for wax. 6. No; it only needs scraping and cleaning.

[3885.] *Mishaps in Queen Mating.*—Your advice on the following would be much appreciated. I started bee-keeping in March last, buying two stocks in skeps and transferring by placing skeps above frames as advised in "Guide Book." All went well until the latter end of June, when No. 2 stock, which was the stronger, was working in two racks of sections. On June 27 this stock swarmed, and then the trouble began. I hived the swarm in a "W. B. C." hive, and cut out all queen cells except one in swarmed stock. This one apparently hatched, but about 4 p.m. on the fourteenth day after the swarm issued there was immense excitement, the bees running all over hive front. This continued for two or three days, so I concluded that queen had been lost on her mating flight, and I was evidently right, for, on examining the frames a few days later, I found neither queen or eggs. I therefore gave a frame containing eggs, when the bees at once commenced queen cells. Eighteen days later, noticing a few bees clustered together on the grass some 2 ft. from hive, I examined them, and found a queen, which, on being placed on the flight-board, at once ran into hive. I concluded that the queen, on returning from her mating flight, had been blown to the ground by the strong wind at the time of her return. Two days later, however, there was more excitement among the bees, continuing for several days, so I overhauled the frames, but found, again, no trace of queen or eggs. I then decided to purchase a fertile queen, which arrived in due time, and was placed in a pipe-cover cage over unsealed honey on frame containing hatching-brood from another hive. But, on going to release the queen three days later, I found her dead!

I next arranged to buy a lot of driven bees and unite with the queenless colony, and on receiving same I removed five frames from the latter, brushed off adhering bees, and placed frames in empty hive, shaking driven bees on top and leaving them for several days. On Thursday last I dusted both stocks well with flour and united by alternating the frames of both lots in a new hive. There was then a lot of eggs in the combs on which driven bees were. On following day there was no sign of fighting, and pollen was carried in freely as before; but on Saturday and Sunday, although not fighting, bees were again madly rushing over hive front, and pollen-carrying had almost stopped. I sincerely hope that this does not mean that this queen also has fallen a victim. Apparently not satisfied with this, on Sunday, the 3rd inst., the bees of swarm which left this hive were also rushing over their hive-front, and are still continuing to do so; the bees carrying in pollen at the time joining in the others, with the pollen still on their legs. If you could point out any mistakes I have made in management I should be very grateful; also would you kindly inform me: 1. What is the proper inside length (across frames) of ten-frame "W. B. C." hive? One I have bought of a well-known maker measures 15 in., which does not allow any room for spacing frames apart. 2. As I have not got an extractor, will the unfinished sections and combs containing honey, which I shall have to remove when contracting brood nest for winter, keep and be fit to return to bees next spring, or must I give new foundation?

Apologising for length of my queries, and thanking you in anticipation, I send

name and address for reference, and sign —E. R., Sussex, September 4.

REPLY.—On the face of what appears in above description, we can see no fault in your management; indeed, everything appears to have been properly done; but, apart from the bad luck in queen-mating which comes to the best of us at times the results are in several respects contrary to what should have followed. Why this should be, it is impossible for us to say from a distance, and without having seen how the work was done. For the rest, the replies to queries enumerated are as follows: (1) The hive you mention should hold ten standard frames and one dummy; which latter, when lifted out, provides space for moving frames apart. (2) The honey in partly-filled sections will granulate before next summer, so they cannot be used for surplus. The honey should be got out while liquid, or else given to bees as food.

[3886.] *Queen-Mating in September.*—I ordered and paid 5s. for two virgin queens early in July. After sending several letters, I received them late in August, I then caught the old queens in two hives, and caged them on the combs of honey. Also caged the virgin queens (one in each hive) close to old ones. Removed the queens next morning, and liberated virgins. Opened out hives a few days later, but could find no queens, but about fourteen queen-cells, sealed and unsealed, were found in one hive, and about eight ditto in the other. Will you please say: (1) Is it at all likely that queens would mate so late in the year? (2) Are these queen-cells of any use at this late season? (3) Had I better purchase a lot of driven bees and unite so as to get over the trouble, and, of course, cut out all the queen-cells? Name sent for reference. — OLD SCARLET, Peterboro', September 4.

REPLY.—(1) Not much chance of safe-mating for queens still unhatched and the honey-season ended, to say nothing of the very uncertain weather conditions at present time. (2) Very little indeed; only by the merest chance could the resultant queen be mated. (3) Yes; this is by far the best course.

[3887.] *Bees Failing to Seal Brood-cells.*—I forward two samples of comb taken from one of my hives, and shall be glad if you will say whether the comb is affected by foul brood, and, if so, in what stage? Several of my hives are in this condition. Occasionally the bees cast out larvæ in an advanced stage of development, and at other times young bees recently hatched are carried out as well, while some bees crawl about the ground and never return to the hives. Others discharge their excrement on the alighting-board, and up the front of the hive. I have never had foul brood in my apiary, to my knowledge, but for some time have noticed black robber-bees attacking each of the hives which are now found in the state of combs sent. I have always kept naphthaline in every hive, but since discovering the present state of affairs have put a large piece of camphor in those affected, which seems to make the bees redouble their efforts to carry the maggots and infant bees out. If it is not foul brood, can I have brought about the bad condition now existing by putting too much disinfectant in hives? I may say that all syrup used is medicated with naphthol beta solution, and I follow the methods recommended in the "Guide Book." As the winter is fast approaching and whole batches of brood are like sample, the stocks cannot populate themselves as they should do for winter. I have about six hives affected in way described, and they are mostly headed by queens bred this year, and the majority of the frames are filled with comb built from new foundation. (Samples sent are taken from old combs.) In the hives affected, the bees have nibbled some of the combs to powder, which I promptly clear out and destroy. Name sent for reference.—RODERICK, Walsall, August 30.

REPLY.—Judging by combs sent — in which brood in the chrysalis stage occupies nearly all cells, none being completely sealed over we must conclude that it is a case of overdosing with the disinfectants used. The brood appears to have been deserted by the bees in consequence of the strong odour and has perished. We advise removal of all the dead brood, and also of the camphor, without delay. Then replace with full sheets of foundation, and feed regularly till combs are built out.

[3888.] *A Good Start with Bees.—Uniting.*—I started bee keeping this year with one skep, which swarmed on May 4. This sent out a strong "virgin swarm" at the end of June. The parent skep swarmed again about six weeks after the first one left it. The last-named swarm was exceedingly weak, but I hived it on six standard frames, and the bees have now half filled a rack of shallow-frames. I am driving the bees out of the skep and I wish to unite them to the weak stock in frame-hive. I should be much obliged if you would tell me what is the best way to unite them?—F. A. S., Ealing, W., August 29.

REPLY.—After driving the bees into the empty skep, dust them with flour from a dredger and leave them in the skep while you dust a little flour on the bees in frame-hive. Then lift out a frame and jerk the bulk of the bees on to the flight-board of hive, and as they run in, throw the driven

bees on top of them and allow all to run in together.

[3889]. *Heather Failures.*—On July 29, I put down a strong hive of bees with 15 sections of drawn-out comb, as a surplus-chamber in the midst of about 200 acres of heather in the Midland district, and up to the present the bees have not stored any heather honey in sections, although they were wrapped up warmly. I may state that I have taken 50lb. of honey (chiefly clover) from this same hive during the present season. I enclose two bits of heather, No. 1 was grown in Cumberland, No. 2 near my hive. Can you please inform me:—1. Is No. 2 the right sort of heather for honey? 2. How is it I am getting no heather honey? A reply through the medium of your valuable paper will oblige.—HEATHER, Olton, August 29.

REPLY.—Both sprigs of bloom are Calluna vulgaris (or common ling), which is the best for heather honey. The slight difference in growth will be due to the soils of Cumberland and Warwickshire. 2. The weather cannot be favourable for gathering or the bees would, no doubt, put some honey in them.

[3890]. *Suspected Queenlessness.*—Would you kindly say in B.B.J. if the following conditions are any cause for thinking my hives queenless:—I examined a stock yesterday, the queen of which is in her second year, and although there was plenty of food in the hive, and if it is strong in bees not a sign of brood or eggs could I see; nor any drones. I took off two shallow-frame boxes of good honey from the hive in question on August 12, and when putting the wet combs back to be cleaned up, the bees of another stock started robbing, and there was some fighting, but I soon quelled it. I examined another stock (age of queen unknown) and here again I could not find any brood or eggs or drones. This stock also was fairly strong and had plenty of stores. Both colonies appear healthy, and the bees carry in pollen, etc. I thought of putting on a cake of candy and packing down for winter, or should I examine again to see if still broodless? I should much like your opinion on the matter and advice regarding the best course to adopt.—W. ARNOLD, Hants, September 4.

REPLY.—It is by no means safe to assume that a stock is queenless because no brood is found in the combs at this season. You may, however, be able to arrive at a fair conclusion on the point by feeding gently and continuously for a week or ten days, with luke-warm syrup. If, at the end of that time, no brood or eggs are found, or the queen is not seen on the combs, you may conclude that it is a case of queenlessness. With regard to packing the hives down for winter, it is useless to do so unless a fertile queen is first introduced and accepted.

[3891.] *Dealing with Vicious Bees.*—I have two hives located a few miles from here, close by some heather, but the bees of both stocks are extremely savage when being manipulated. On Saturday, September 2, I went to see what progress they were making in some sections that I had placed on, but as soon as I removed the roof of hive No. 1, I got such a warm reception as to leave no alternative but donning my gloves, which I use when dealing with this particular stock. They are Italian hybrids—grand workers, and store a great deal of honey in a season—and seeing that they have this one fault only it seems a great pity to destroy the queen, and give another in her stead. I feared getting into trouble, as the hives are close to a much-frequented lane, and on seeing three people chased by the bees, I promptly closed them up without troubling to put quilts on properly, but am leaving it for the county expert who will visit them shortly. 1. Could I raise some queens from this mother that would be gentle? Should you advise a cross with a Carniolan—Italian or English drone? If the latter, would the progeny be vicious? The other stocks—which are the ordinary English bees—I examined next day and they likewise were very much infuriated. Yet the stocks left at home I can handle without gloves. 2. Do you think that not being near a human habitation makes the bees not like any one to go near them? I do not like my bees to be a nuisance to any one, and as I thought of putting several stocks in the same place next season with the idea of establishing a nice out-apiary, I should have to reconsider the matter if it was likely that they might turn out like the two before mentioned. 3. Do you think it would be better to place the savage ones in a bee-house so that I could manipulate them inside, or have you any prejudice against bee-houses for use in this country? 4. I find that stings cause me to swell a great deal, although this is my fourth season. Does it take one very long to become sting proof? This is my only trouble with bees, but I hope to overcome it some day. —H. E. W., Birmingham, September 4.

REPLY.—1. If you could secure a cross between the bees referred to and a Carniolan drone it would tend to modify the viciousness of the progeny very much, as bees get their disposition from the drone and working qualities from the queen. 2. We do not think the trouble arises from the hives being located away from dwelling-houses, though it may be caused by proximity to "a much-frequented lane," as stated, especially if the passers-by start pelting the bees with earth or stones. This readily causes viciousness. 3. It might

tend to quietness if the vicious stocks were kept in a bee-house, which latter—if kept scrupulously clean—is very suitable for keeping a few stocks in under your circumstances. 4. Some people take longer than others to become indifferent to stings; there is no rule to go by.

[3892.] *Insect Nomenclature.*—I shall be greatly obliged if you will tell me the name of the enclosed insect, which I caught on a window in my house. When alive it looked so much like a brightly-marked bee, or wasp, that I wonder whether it is an insect that preys on one or other of them, or whether its likeness to an insect with a sting is protective? I am glad to say that, since feeding the bees as recommended by you in reply to my query on page 346, my Doolittle queen has begun to lay again, and has filled the best part of six frames with brood and eggs. Thanking you for your advice, which prevented me from destroying her. —E. L., Perthshire, August 31.

REPLY.—The insect sent, although very like a bee in appearance, belongs to the two-winged flies (Diptera), genus Eristalis. Its similarity to the bee acts as a protection to it, this being one of the many examples of protective mimicry to be found amongst insects. It is quite harmless to bees. The larvæ live in rotting matter, and may frequently be found in stagnant water. We are pleased to hear that the queen you wrote about is found to be all right again.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

September 9, at Dumfries. — Thirteenth Annual Honey Show of South of Scotland Beekeepers' Association. Five Open Classes for Honey, including three 1-lb. jars and three 1-lb. sections; class for single 1-lb. jar and single 1-lb. section; also one bottle and one section. **Entries closed.**

September 12, at Woodstock.—Honey Show of the Oxfordshire B.K.A., in connection with the Woodstock Agricultural Show. Open Classes (with free entry) for single 1-lb. section and single 1-lb jar extracted honey. Prizes, 10s., 5s., and 2s. 6d. in each class. Schedules from H. M. Turner, 4, Turl Street, Oxford.

September 13, 14, and 15, in Waverley Market, Edinburgh, along with Great International Flower Show. Four open classes for Sixes, Sections, and Bottles of Flower and Heather respectively, with prizes of 15s., 10s., 5s., and 2s. 6d., for an entry fee of 2s. each class. Schedules now ready from W. Weir, Secretary, Heriot, Midlothian.

September 14, at Castle Douglas. — Honey Show, under the auspices of the South of Scotland Beekeepers' Association. Five Open Classes, including three 1-lb jars, three sections, and class for single 1-lb. jar and single section. **Entries closed.**

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). **Entries closed.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 27, at Altrincham.—Annual Show of the Altrincham Agricultural Society. Good Money Prizes for Honey, along with Silver and Bronze Medals of the Cheshire B.K.A., and others. Open Class for Frame-Hive (unpainted). Schedules from J. Herbert Hall, 2, Dunham Road, Altrincham. **Entries close September 9.**

October 3 to 5, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

Notices to Correspondents & Inquirers.

*** A correspondent, who signs "A Lover of Nature," asks if anyone living in the district around Ropley, Hants, will kindly say in B.B.J. what are the prospects for bee-keeping and fruit-growing in that locality?

*** Referring to the query on page 350, Mr. F. J. Freeman, 17, Highfield Road, Birmingham, writes:—"In answer to 'L. A. S., Bordesley, Birmingham,' in last week's B.B.J., I should be pleased to show him my bees and their work, and would also help him in any manner I could."

SUSSEX DOWNS (Brighton).—The flowers sent are those of sainfoin, one of the very best plants for bee-forage.

G. W. S. (Bristol).—Bee Parasites.—The insect you describe is no doubt the *Braula cæca*, as supposed. They are troublesome in hives at times, but do not flourish in this country, our winters being too cold for them. The description in "Guide Book," which you have, gives all the information we can afford about getting rid of them.

J. B. L. (St. Leonard's).—The book you name can often be had for two or three shillings on a second-hand bookstall.

AN INTENDING BEE-KEEPER (Plymouth).—All the points you ask for information upon are fully described in the "Guide Book," which can be had from this office for 1s. 8d. post free.

Suspected Combs.

G. M. P. (Haslewood). — No disease in comb, which contains a few cells of "chilled brood" only.

O. K. W. (Anglesey). — There is foul brood in comb sent.

Honey Samples.

J. E. R. (Abington, Biggar). — Both samples are very good indeed, and fit for showing anywhere.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

CHESHIRE AGRICULTURAL SOCIETY

SHOW AT CHESTER.

The annual show of the above society was held at Chester, on Wednesday, August 30, the honey department being under the management of the Cheshire Bee-keepers' Association. The exhibition of honey was excellent, and, in most classes, the competition was very keen.

The Rev. T. J. Evans and Mr. T. D. Schofield officiated as judges, and made the following awards:—

OPEN CLASSES.

Complete Frame Hive (5 *entries*).—1st, Mrs. Wm. Cartwright, Moore, Warrington; 2nd, George Rose, Liverpool; r., George Rose.

Twelve 1-*lb. Sections* (5 *entries*). — 1st, W. Ratcliffe, Barthomley; 2nd, A. Hamer, Llandilo; 3rd, J. Stone, Little Cubley, Sudbury.

Twelve 1-*lb. Jars Extracted Honey* (13 *entries*). — 1st and 2nd, J. Berry, Llanrwst; 3rd, L. Quayle, Glenmay, Isle of-Man; r., A. Hamer.

Observatory Hive (3 *entries*).—1, G. Rose, Liverpool; 2nd, H. Potts, Preston Brook; 3rd, E. L. Parkes, Hooton.

Wax (6 *entries*).—1st, W. Ratcliffe; 2nd, J. Berry; 3rd, G. Lambert, Comberbach; r., E. C. R. White, Newton Toney.

MEMBERS, DISTRICT, ETC.

Six 1-*lb. Sections* (15 *entries*).—1st, W. Ratcliffe; 2nd, E. Maxwell, Malpas; 3rd, J. Astbury, Kelsall; r., Rev. E. Charley, Rossett.

Twelve 1-*lb. Jars* (*Light*) *Extracted Honey* (26 *entries*).—1st, G. H. Garner, Altrincham; 2nd, J. Griffith, Bunbury Heath; 3rd, B. Thomas, Bellaport; r., A. Thomas, Frodsham.

Twelve 1-*lb. Jars* (*Medium*) *Extracted Honey* (11 *entries*).—1st, S. Gerrard, Heswall; 2nd, H. V. Pennington, Heswall; 3rd, Mrs. Taylor, Rossett.

Two Shallow Frames of Comb Honey (11 *entries*).—1st, J. Wynne, Rowton; 2nd, H. B. Eaton, Sandbach; 3rd, E. Maxwell; r., S. Jennings, Over Tabley.

Beeswax (16 *entries*).—1st, H. B. Eaton; 2nd, H. Potts; 3rd, E. Maxwell; r., W. Ratcliffe.

Six 1-*lb. Jars Extracted Honey* (27 *entries*). — 1st, J. Astbury; 2nd, B. Thomas; 3rd, G. Lambert; r., H. Stubbs, Crewe.

DISTRICT ONLY.

Six 1-*lb. Jars Extracted Honey* (23 *entries*).—1st, J. Astbury; 2nd, Mrs. Taylor; 3rd, F. H. Turner, Mouldsworth; r., S. Mayers, Christleton.

The Rev. T. J. Evans gave a lecture in the bee-tent, and also conducted an examination for third-class experts' certificates.—E. CHARLEY, Hon. Sec., C.B.K.A.

HONEY SHOW AT BRAMHALL.

The sixteenth annual show of the Bramhall and Woodford Horticultural Society was held on September 2, in the charming Archery Grounds of Bramhall Hall (by kind permission of C. H. Nevill, Esq.).

The entries this year create a record for this society the honey section especially, the entries for which more than doubled those of any previous year, the result being a very fine display of honey and a keen competition. Mr. W. Bradburn (expert), of Altrincham, officiated as judge, and made the following awards:

OPEN CLASSES.

Twelve 1-*lb. Sections.* — 1st, Wm. Ratcliffe, Barthomley, Crewe; 2nd, J. Pearman, Penny Long Lane, Derby; 3rd, J. Stone, Little Cubley, Derby.

Six 1-*lb. Jars Extracted Honey.* — 1st, J. Stone; 2nd, J. Pearman; 3rd, W. J. Sharratt, Bramhall, Cheshire.

1-*lb. Beeswax.*—1st, E. C. R. White, Newton Toney, Salisbury; 2nd, J. Pearman; 3rd, Septimus Wright, Wilmslow.

LOCAL CLASSES.

Six 1-*lb. Sections.* — 1st, Septimus Wright; 2nd, John Turner, Bramhall; 3rd, James Winterbottom, Cheadle, Hulme.

Six 1-*lb. Jars Extracted Honey.* — 1st, W. J. Sharratt; 2nd, R. P. and J. B. Kershaw, Bramhall; 3rd, Septimus Wright.

One Shallow-Frame of Comb Honey.—1st, John Turner; 2nd, P. Bell, Davenport.

Beeswax.—1st, Septimus Wright; 2nd, W. J. Sharratt; 3rd, J. Turner.

Bronze Medal.—Septimus Wright.

A well-attended and appreciative audience listened to an interesting lecture—with illustrations in the bee-tent — delivered by Mr. W. Johnson, second-class expert, of Dunham-Massey.—John SIBSON, Hon. Sec.

HEREFORD HONEY FAIR.

The annual honey fair held under the auspices of the Herefordshire Beekeepers' Association, which has Sir James Rankin, M.P., as its president, took place in the Hereford Butter Market on September 6, this being the twenty-first annual show, and, thanks to Mr. Joseph Thomas, the acting hon. secretary, a very successful show has resulted. Indeed, there has not been such an exhibition for several years past, while the quality of the honey was excellent.

Mr. E. J. Burtt, Gloucester, was the judge, and made the following awards:—

Honey Trophy.—1st (silver medal), John Helme, Norton Canon; 2nd, W. Tomkins, Burghill.

Twelve 1-lb. Sections (open).—1st (bronze medal), John Helme; 2nd, J. Owens, Yazor; 3rd, W. Tomkins.

Six 1-lb. Sections.—2nd, — Whitcombe, Putsom; 1st and 3rd not awarded.

Twelve 1-lb. Jars Extracted Honey (open).—1st (bronze medal), T. Meadham, Burghill; 2nd, J. H. Wootton, Byford; 3rd, J. E. Williams, Byford.

Six 1-lb. Jars Extracted Honey (novices).—1st (bronze medal), S. Palmer, Pontilas; 2nd, A. W. Burgoyne, Lyonshall; 3rd, Miss Day, Wellington.—(*Communicated.*)

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of August, 1905, was £2,037.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

THE HONEY SEASON.

[6006.] *Alternations.* — It has been a strange honey season with ups and downs all through. At one time it promised a record one, at another it threatened a semi-failure. And, indeed, in various parts of the country, it has been both. On light and sandy soils, where the drought proved most severe, it burned up the white clover—the main source of supply—to such an extent that there has been really no surplus, and, in some cases, bee-keepers will have to feed to ensure sufficient stores for wintering safety. Here, on our heavier and more retentive soils, clover stood out well until the closing days of July, and good returns were obtained, while the quality was of the very finest. With the advent of August came a marked change, cold and cloudy weather, east and north winds, and heavy rains, so that for over a fortnight bees were confined indoors when they were at their very strongest, resulting brood-nests becoming drained of stores and unsealed sections were drained down. Then came a few days of fine bright weather, with a grand wealth of heather bloom, raising the hopes of beemen to a high pitch in the expectation of a bountiful return from this their best-paying source. This splendid flow, most of which was consigned to brood-bodies, was, however, shortlived when the weather again turned wet and cold, with the result that the supply of pure heather honey will be the smallest for many years. With bees cramming body-box and sections, nothing worth speaking of has been done since August 25. Body-boxes have, however, been amply replenished, for which mercy I, at least, am thankful, as it will save any feeding. My two best hives will yield 100 sections each, but few others will exceed half that number. Prices are:—Clover, 10d.; blend (clover and heather), 1s.; heather, 1s. 3d. The last in great demand at almost any price.

Working for Comb and Extracted. — In connection with my suggestion on page 263 (July 6) that the outside combs of supers might be frames, and that these would tempt up bees at an early date if full of clean comb, I have had several communications, one of which refers to the use of racks so constructed as to take both sections and shallow-frames, of which there are several on the market. I note that in *all* my section-racks this year, the outside rows are incomplete; in some cases, in fact, the foundation is not even drawn-out when the centre ones are sealed over. The heavy pressure under which I have been keeping bees working, by excessive supering, may account for it, but I think the above might prove a remedy. If so, it would be *one* point in favour of the 4 by 5 section.

Not Proven!—I am a believer in young queens and have consistently advocated their use. When, however, I read Mr. Alexander's contributions to "Gleanings" for July 1 (page 715), I at once entered a point of interrogation on the margin. Mr. J. M. Hooker has kindly—in our JOURNAL of July 27—supplied the gist of the article, so I need not recapitulate. I give Mr. A. the weak queens, the medium ones, and the unfertile lot, as proofs that old queens are not good, yet yielding even so much is a heavy strain on my credulity. But when he contends that the mere fact of queens being only two and a half years old caused the loss of sixty-seven out of one hundred and three colonies, I enter a demurrer. Such a statement rather overreaches itself, causing the sceptic to scoff, and I, for one, am a doubter of the truth of his deduction. Let us say that, at least, the case must be held as "not proven."

I am carrying on, at least, one-fourth of my queen fully that age.

Brick Honey.—Some of our extracting friends might make experiments along this line, and test whether it is practicable to preserve honey in this country in the form of solid bricks. I see no reason why it should not be feasible with many, and they should be able to preserve it in this handy form at least during winter and spring, if not early summer. If the experiments prove successful it would be an excellent way of disposing of a large part of the surplus extracted honey. I see no reason to anticipate that there would be any danger of loss in either flavour or aroma under proper treatment. The scheme is, at least, well worth giving an experimental trial.

A 20-lb. Swarm.—The gentleman who was blessed with this great congregation of bees last year, 1904, failed to respond to an invitation to report results at the end of the season. If this meets his eye he might still acquaint us with the results. I desire the information, not from any morbid desire to pry into his concerns, but only in the best interests of apiculture, and to help to prove or disprove a theory I hear about very large swarms not coming up to expectations in working out in the true ratio of weight.—D. M. M., Banff.

FOR MAKING SOFT BEE-CANDY.

[6007.] In making this candy, I use an ordinary enamelled saucepan, or preserving pan, and into this is put 15 lb. of cane-sugar (white crystals) and three quarts of water (hot for preference). Place over a clear, strong fire and stir until the sugar is quite dissolved. When it begins to boil draw the pan aside for a moment, and while it continues to boil slowly remove the scum and other impurities from the surface of the sugar. This done, return the pan to the fire, and let it boil as fast as possible, without stirring, for about twenty minutes. Then, to ascertain if boiled enough, have a bowl of cold water ready at hand, and dip the forefinger of one hand first in the cold water, next in the boiling sugar, then again in cold water, and with the sugar adhering to the forefinger try to make a soft ball from it, like a piece of mastic ready for use. These last operations should only occupy two or three seconds. The forefinger must be kept curved whilst dipping it into the boiling sugar, and though a little skill and courage are required to do it for the first time, it is not difficult and does not burn the finger at all. A sugar-boiling thermometer would be a convenient substitute.

If unable to make a ball in the way mentioned, the sugar must be boiled a little longer, otherwise the boiling is finished. Next pour in 5 lb. of honey ready at hand (about 5 oz. per lb. of sugar). The mixture must be then boiled again for one or two minutes, but great care must be taken not to let it overflow, as honey is apt to rise quickly like milk. I find that adding a small piece of butter of the size of a hazel-nut often causes it to settle down, but not always.

After the second boiling remove the pan from the fire and medicate with naphthol beta (two tablespoonfuls of the "Guide Book" solution for 20 lb.), mixing it well in. In cooling the mixture pour it into a square tin, 21 by 15 inches. In one of this size, 20 lb. of candy will cool sufficiently in an hour, or in far less time if the vessel is placed in cold water. During the cooling process do not stir while hot. Note this well, for without this precaution the candy will be not smooth but rough in grain.

When the sugar has so cooled down that the finger may be kept in it for half a minute without scalding, then begin to stir, and continue to do so until the candy becomes white and stiff. It is now finished, but in order to transfer it into suitable moulds it must be warmed again; therefore, the whole is put into another pan or vessel which fits on to a boiler containing hot water. In a short time the candy becomes more or less liquid, like cream, and an occasional stir must be given to dissolve all lumps. When properly dissolved and brought to almost boiling point (say, 204 deg. Fahr.), pour it into the moulds or boxes and allow it to cool. Candy thus made, if stored in a dry, cool room, will keep soft for years.

If the sugar has been accidentally overboiled (in which case it is brittle and breaks when tested), add a little water and boil again to the proper point. As a preventive of overboiling, remove the pan from the fire while testing whether cooked enough. Also, to prevent mishap in another direction, the saucepan used for making the candy should not be more than half full. It must also be noted that the honey is to be boiled thoroughly, not merely mixed with the sugar.

I have toiled not a little in the endeavour to make a bee-candy which, while containing as nearly as possible all the advantages of the natural food, would have the advantage of being medicated without offering any inducement for the bees to start robbing, as so frequently happens when fed in autumn or early spring with honey or sugar-syrup. My own stocks have been fed entirely on this candy during the whole winter, and I have not lost a single colony during all the time I have been in charge of the Abbey Apiary here.

It is also very good for feeding queens

and their attendant bees in mailing cages, as I have tested it scores of times for this purpose without a single complaint.

Those who do not care to make the candy themselves may obtain it from Mr. Geo. Rose, Liverpool, under the name of "Devonshire Candy." — Br. Columban, O.S.B., St. Mary's Abbey, Buckfast, S. Devon.

SOME BEE-NOTES FROM ESSEX.

[6008.] *Cheap Honey Jars.* — Without casting any reflection on the cheaper jars advertised, because who find that a cheap article answers their purpose, should have what suits them, it is certain that low prices must mean low quality.

It makes one ask —Where are the honey-jars of high-quality glass that were easily obtainable twelve or fifteen years ago? We paid a good price for these, but were satisfied, because quality is a leading feature with any bee-keeper who would be successful. Previous to the time mentioned above, honey was seen at the few shows where bee-produce was staged, in pots and bottles of all sorts, sizes, and conditions. I have myself seen run honey exhibited in gallipots, jam bottles of various sizes, and old bullseye and pickle-bottles; making quite a regiment of odd pots and bottles, so that if any attempt at all was made at arranging the show-tables, it was only necessary to place the big pots at the back and the smallest in front. This was all that could be done. Then came a longing for better appearances, and we had metal-topped honey-jars of really good, white glass. I am aware that many of our best showmen of that time have now gone from among us, but they were Englishmen, in the bee-goods trade, and would not be so unpatriotic and lacking in public spirit as to take all the secrets of the bottle business from us. However, bee-keepers are now left to find at their own expense that cheapness does not usually go hand-in-hand with good quality.

Wasp Stings.—I recently met a bee-keeper who had got badly stung by a wasp taken into the mouth by accident while drinking a glass of ginger-beer, while out cycling. Being stung at the base of his tongue the consequences might have been very serious. As it was, I am told, that the pain was very great for some time, and he was almost blinded. But, no doubt, the comparatively slight trouble was, more or less due to the fact that he, as a bee-keeper, gets a sting now and again.

Swarm-catchers. At the commencement of the swarming season this year, I fitted up several small boxes with one standard frame of comb in each. These were hung in the hedge round the apiary, so that if the bees swarmed, they would be induced to cluster in them, but my swarms quite ignored these "catchers."

Discarding Good Advice. — I have this season met an unusually large number of middle-aged and even old persons who have recently commenced to keep bees. Most of them I found had quite ignored the oft-repeated advice, given in your pages, to "go slowly" at the start. This is sound advice, as some of those referred to will have found to their cost, I feel sure. Unless reliable help is obtainable, a beginner, be he sixteen or sixty, cannot well manage and keep up his interest in a great number of hives of bees that are, in his hands, an unmanageable quantity. It is mistakes of this sort that so often cause what is known as "upsets" in the apiary, and, in this connection, I may mention that a number of bee-keepers, I have met with lately have asked if I could give an explanation of an "upset." Some, of which I got particulars, could not be explained or accounted for, but others were clearly due to carelessness or oversight on the part of the bee-keepers themselves. One had left pieces of comb containing honey-comb exposed in close proximity to the hives. Another had put outside a lot of odds and ends of honey in bits of comb in the garden for the bees to clean up, the result being that the latter became excited and were made unmanageable, so much so, that the consequences might have been serious, as one person was badly stung.—W. Loveday, Hatfield Heath, Harlow.

NOVEL BEE-HIVES.

[6009.] I was much interested in "Beeway's" letter (page 234, 5918) *re* bees in Edenhall yard, having lived there myself when a boy.

It may interest some of your readers to learn of a still more novel hive—viz., a tombstone, which stands in Irongray Churchyard, near Dumfries, and in which the bees sometimes survive the winter, but not always.

I have wondered often where they build their combs, as there could be no space, I thought, in an upright stone.

A few days ago I got Mr. J. W. Dods, memorial sculptor, to examine it, and he says the bees occupy a space three feet long, eight or nine inches deep, and two or three inches wide. The monument is made up of two stones, which touch each other, I understand, until within eight or nine inches of the top, the stone being finished off with a triangular pediment on top, and it is where this pediment joins that the bees get access, probably owing to the sinking of the stones' foundation.

A few yards from this novel bee-hive is

the burial-place of Jeanie Deans, the heroine of Sir Walter Scott's "Heart of Midlothian."

The season here promises to be a good one, stocks being strong, and weather all that can be desired from a bee-keeper's point of view. In this spot we have had nice rains; but this is not the case within a very short radius, where rain is badly wanted. — HENRY MARRE, Newtonairds, Dumfries.

HOUSE-MARTINS AND BEES.

[6010.] As none of your readers seemed able to answer my question on the above point in B.B.J. of August 10 (page 316), I wrote to the Director of the Ornithological Department of the South Kensington Museum, askins for information on the subject. Dr. Bowdler Sharpe replied that he could not definitely say whether swallows and martins preyed upon bees, but he would endeavour to obtain further facts. This morning I have received the enclosed courteous communications, which I think will prove interesting to bee-keepers. — W. H. HARRIS, Hayes End, Middlesex, September 4.

Correspondence below:—

Sparrow's Hanger, Alton, Hants,
September 3, 1905.

DEAR SIR,—I sent your letter on to my friend Mr. Seth-Smith, the editor of the *Apicultural Magazine*. He has asked Mr. Thomasset, and I enclose vou his reply.—Very truly yours, R. BOWDLER SHARPE.

W. H. Harris, Esq.

Hawkenbury, Staplehurst, Kent,
August 27, 1905.

DEAR SIR,—Mr. D. Seth-Smith has forwarded me your letter concerning bees and swallows. I have kept bees for a good many years and have never seen swallows taking them. Formerly bee-keepers considered swallows and martins as enemies, but now it is almost universally admitted that these birds leave bees severely alone. Lately a bee-keeper, whose name I regret I do not recollect, interested himself in this subject. During one summer he shot from time to time a number of swallows and martins in the vicinity of his apiary, but only in one case was one of the birds found to contain a single bee.—Yours faithfully,

BERNARD C. THOMASSET.

HEATHER PROSPECTS:

NORTH-WEST DURHAM.

[6011.] Bees were taken to the moors on July 29, a fortnight earlier than usual owing to the short duration of the clover-honey flow. A break in the weather took place after the hives had been on the moors a few days, and the bees that were crowded in three and four crates were reduced to one and two crates by August 12, owing to the cold north and north-east winds which prevailed till then. After that date they had a week of ideal weather for comb-building and gathering, when it again became cold, and has continued so for the last fortnight. The moors are now in full bloom, but the bees are unable to take advantage of it. What with the cold winds and wet weather, the prospects of a good heather harvest are certainly disappointing.—J. WALTON, Hon. Sec. N.W.D.B.K.A., Blackhill, September 2.

NOTES FROM DERBYSHIRE.

BEES AT THE HEATHER.

[6012.] I fear the bad weather will make a notable decrease in the weight of supers on hives at the heather this year. I went to see mine on August 22. A grand day it was, and the view was splendid. I never saw the hills look more beautiful, the purple bloom of heather being clearly visible on the Sheffield moors twenty miles away. As I mounted the Stone-edge Hill, the blue sky north of me was full of promise of a good time for the bees, but rolling up from the south were visible darker clouds coming slowly but surely on, and indicating a change for the worse in the weather; but at 4 p.m. I was among my eighteen hives, and what a hum the bees made!—truly, "going for all they were worth." They had been doing grandly up to that time with every prospect of a good harvest, and had the fine weather continued, as it was then, we should have had a bumper crop, but an hour later the threatening clouds were over us, and, as the sun disappeared behind them, one could feel that the warmth had gone, for the "hum" was stilled, and soon there was scarcely a bee to be seen. I went again on my "bike" on September 1, but it could be easily seen that nothing had been gathered in the meantime; very few bees were on the wing, owing to the cold wind blowing, and all hives were quiet by 4 p.m. So with heather past its best, and little or no sunshine, the weak lots will want feeding when back at home. My best hive has yielded about three dozen sections, the next best about 15 lb. in a super, while from four others I got about 10 lb., and very little in the brood-frames at present. The latter were weak lots when taken to the heather, as two of them had been queenless for three weeks before starting. The clover did not yield so well as it should have done with the quantity of bloom there was out. It seemed to stop short at the finish for want of a few showers to prolong the bloom. Owing to this, what looked like being a "record"

year for me will only show an average of about 30 lb. per hive.

I had a bit of bee-work on hand a month back that is worth recording, I fancy. A bee-friend of mine had a stock of bees in a frame-hive given to him last spring that had not been opened for four years. Its owner did not know whether it had sections on or not. As the roof could not be lifted off, my friend kept it all the summer as it was, thinking that the bees would swarm; but they did not, so we set about the job of finding out what held the roof down. After carrying the hive into a shed, we prised off first the top, then the two sloping boards of roof, and found the whole roof-space packed with honey and comb and bees! I felt a bit staggered at first to know how the lot was to be got out; but after cutting and carving for about two hours, we managed it by cutting down to top of frames first, expecting to find the section-rack on, but it had been removed, and the remover had never put a scrap of anything on top of frames, so the bees had worked in the roof for four years. All the brood was in the body-box, and seven out of nine frames were as well packed with brood as any beeman could wish to see. I could not say how much honey we got, but I reckoned there were three square feet of sealed honey in the comb we cut out. Among it was some of last year's dark stuff, along with some gathered, no doubt, the year before and candied as white as snow. All this makes me think we keep our bees too warm, as a rule, if they will winter so well under a roof made of half-inch boards; not only so, but the bees could get out all round the edge of the roof, so there was plenty of ventilation. It was also about the flimsiest-made hive I ever saw.

I was very pleased to see that the entry-fee is lowered down to one shilling at the two big London shows of the Confectioners and Grocers respectively. I am going to make an entry myself, but it is uphill work showing when any one gets his exhibits smashed up, as I did at Shrewsbury. It cost me 9s. 6d., and such experiences knock all "showing" out of one, but I shall have another try, and if there is another failure, I shall feel inclined to throw up. TOM SLEIGHT, Pilsley, September 4.

EXHIBITING AT HONEY SHOWS.

[6013.] In your editorial report in B.B.J. (September 7, page 351), of the Confectioners' and Allied Trades' Exhibition, I notice in the third par. you say, "We hoped to have seen a larger number of exhibits, in view of the trifling sum charged for each entry, and the very liberal money prizes offered for competition; but bee-keepers are a bit curious in some respects, and certainly do not appear to show much appreciation of efforts, however praiseworthy, made in the endeavour to bring about a large and good display of bee-produce on the show-bench."

As a bee-keeper of many years' standing and a constant reader of the B.B.J., I trust you will allow me to give my own experience of exhibiting honey this season.

In looking down the list of "Bee-shows to Come," I picked out a show at which I decided to enter honey for competition, and wrote for schedule, which duly arrived. The classes in which I chose to exhibit were free of any entry fee, but the exhibits were to become the property of the show society. So far, so good. I returned the entry form to the secretary, and, in due course, received the class-number labels for my jars, which were sent properly addressed and securely packed, per passenger train and carriage paid.

The show was held on August 16 last—which is now getting on for a month ago—but from that day till now, I have had no acknowledgment as to whether my honey ever arrived at its destination, whether it was ever staged, whether it gained any prize, nor yet have I seen any report of the show in the B.B.J.

Now, Sir, if other bee-keepers are treated thus, after giving of their best produce free, is it any wonder that "bee-keepers *are* a bit curious in some respects and do not seem to appreciate," etc., etc.

If this meets the eye of the secretary of the show to which I refer, he will know I am speaking truly, and I therefore do not wish to shield myself behind any nom-de-plume, but append my full name, etc., which is — ALBERT L. N. LONG, Witney, Oxon, September 8.

BEES REFUSING TO UNITE.

[6014.] Whilst feeding some rabbits close to my bees about 6.45 p.m. on August 21 I found a cluster of bees in a dwarf pear tree. I subsequently found this was a driven lot which I had united to a weak stock with a drone-breeding queen. My experience is that once bees become queenless or have a drone-breeding queen, it is useless to try to do anything with them. They will not unite with others, nor will they raise a new queen if given a frame of brood from another hive, for, being all old bees, they seem to have more fight and strength than others. I had, of course, removed the queen (a drone-breeder) three or four hours before uniting. I enclose the drone-breeding queen referred to. Perhaps you will be able to pass an opinion. She is about two months old.—FRANK JARVIS, Bucks.

[The inference you draw from above

experience is a very reasonable one, and is probably about right, though we cannot confirm it from our own experience.—Eds.]

HELPING BEGINNERS.

[6015.] Having been an interested reader of the British Bee Journal for some time past, I am thinking of setting up three, or perhaps four, hives of bees; but, residing rather close to town, I am doubtful whether it will be a success. Would you mind publishing this letter, asking some bee-keeper in this district whether he would give me an insight into the keeping, etc., of bees, by letting me see him handle his hives, and also tell me whether the situation is of any use for bee-keeping? I attach name and address for reference, and sign—A. H. D., Birmingham, August 29.

EARWIGS EMPTYING SUPERS.

[6016.] Referring to query in B.B.J. of August 31 (No. 3883, page 349), in which the question is asked whether earwigs are injurious to bees, I can say from experience that although they may not be injurious to the bees, they are very destructive to the combs, and steal the honey wholesale if opportunity favours them. On one occasion I placed a super-clearer under a rack of shallow-frames, all being full of honey and well capped over. Distance prevented me from removing the super for three or four days, and when the frames were uncovered for removal I found that all the cells had been uncapped, and every drop of honey carried off; while the combs and clearer-board were black with hundreds of earwigs, the board being also covered with coarse pieces of wax. It was not a case of robbing, as there was not a bee to be seen in the super.—G. S. F., Ilford.

[The above experience is new to us, and we shall be glad to hear if other bee-keepers who have had shallow-frames full of honey emptied by earwigs.—Eds.]

A BAD SEASON IN LINCOLNSHIRE.

CURIOUS VARIATION IN RESULTS.

[6017.] It may interest some B.B.J. readers to hear how we have fared in this part of Lincolnshire. I have kept bees now for about nine years, but with me this has been by far the worst I have yet experienced. This seems very strange in view of the fact that other bee-keepers in various parts of the country have done so well. It is also remarkable that in 1904, when so many complaints of failure were reported, I did wonderfully well, getting nearly 400 lb. of surplus from seven hives. My surplus this year will only be about 70 lb. from eight hives yet they were all crowded with bees in the spring, and had an abundance of stores. Everything promised well at first, but the honey-flow was extremely short, and since the end of June nothing could be got in the fields, so that bees have been living on what was previously gathered, and have now almost no stores at all. One strong colony from which I got 4 lb. of honey will require 20 lb. of sugar to keep it alive this winter, and with one exception all my stocks will require a lot of food. Last season I cleared £10 from the bees, compared with about as many shillings this time, yet the hives are all strong with bees, so that it must be the complete failure of the honey harvest in my locality. I trust we may do better another year.—F. B. L., Boston, Lincs., September 9.

A UNIQUE OBSERVATORY HIVE.

[6018.] When at a village in the south-west of Cornwall, I was asked to look at a hive of bees. The cottager took me in the house to see it. Like many of the houses in this part, it was built of clay, and at one side of the fireplace was a china cupboard with a glass front. A small hole appears to have been made by mice or rats to the outside, by which a swarm of bees had entered and taken possession of the lower shelf of cupboard, and are making very satisfactory progress, in full view, although, perhaps to their advantage, in the darkest corner of the room.

I find the following a splendid recipe for destruction of wasps' nests and bees in trees, etc.:—Take a piece of cyanide of potassium, about the size of a marble, and place it at entrance of hole, on a sunny day, if possible. It will quickly disappear, and so will the wasps. A shillingsworth from a chemist is sufficient for a score of nests.—W. H. B., Cornwall, September 9.

QUEENS "PIPING."

[6019.] The day following the issue of a swarm from one of my hives, I examined the stock with the intention of cutting off all queen-cells but one. On opening the hive, I could distinctly hear the "piping" of a young queen, but could not then believe one had yet hatched. However, on examining the third comb, I observed an empty queen-cell, and, at the same time, heard the piping referred to, which led me to the exact spot where the young queen was located. I did not replace comb in hive at once, but watched the proceedings, and several times did that queen "pipe" while the frame was in my hands. No other queen-cell had hatched, and the vacated cell was the only one on the said comb. So far as I could see, the sound

was produced by vibrations of the queen's wings when stationary, and not in the endeavour to destroy her unhatched rivals, as there was neither a queen-cell nor an other virgin near her at the time. After this experience, I am led to believe that —in addition to "piping" when in combat with her rivals—the young queen produces this sound when the colony is about to send forth a cast, and the first-hatched young queen — being through some mysterious instinct aware of the fact — exercises her wings to strengthen them for her early flight.

I should like to know if some other reader has had a similar experience. — T. ALUN-JONES, Rhosemor, Flintshire, September 6.

BEE-KEEPING AS A BUSINESS.

[6020.] I trust that this somewhat belated reply to the query 3821 (page 286) of your correspondent—who, under the nom de plume of "A Would-be Bee-keeper," writes to the B.B.J. of July 20—may not, at this distant day, appear out of place. As a matter of fact, the article in question only came under my notice in Johannesburg two days ago. I have never kept bees, and am, therefore, not qualified to write with authority upon the financial prospects of keeping a large apiary, nor is it my intention to do so. My sole object in writing is to urge upon your correspondent the importance of adhering to the life he has chosen, to follow the aboriginal instincts of his nature, and the whispered calling of his soul, and so, as Keats sings:—

"Do the deed,
Why my own soul has to itself decreed."

What more beautiful life than that which your correspondent conjures up before our eyes—especially eyes grown weary with the sordidness, the hideousness, and the shame of a city such as this.

To live in a garden with his brown and golden bees, caring for, and succouring them; being cheered, and, so, cared for in return, by the flowers which surround him, and are his companions—great, monstrous hydrangeas, fox-gloves, purple lilies, lilies washed white with the milk of Juno, pansies, "Sweet Heart of the Trinity," basil and purple lavender (said to dispel melancholy from the soul), flowers strangely mottled, and flowers subtle and sensitive which love only the sun, and others which reveal their splendours to the moon alone, the air ever heavy with the perfume of the honeysuckle and the rose —surely the soul itself must grow flower like amidst such surroundings.

It is, I feel, in such a scene that this young man— whose "bent is literature, principally poetry" — pictures himself, singing with the world a new song, creating, for those who have eyes to see, the vision of beautiful, undreamed-of things. Oh! young man, you have, as you say, been born in an age when literature has fallen into neglect, amongst a people "whose God is their belly, and whose glory is in their shame." Nevertheless, be of good cheer, follow where the soul calls, even if penury be your portion, it is a penury which bears no shame. Were not many of the Immortals members of the order of Noble Poverty? Was not the body of Johann Wolfgang Amadeus Mozart carried, unfollowed, to the common burying-ground of the poor? Did not one of the greatest geniuses of our own, or any time, die starving in a Paris garret?

Follow the dictates of your own soul, and, e'en though riches be denied you, though fame shine not upon you, your pathway shall be strewn with flowers.

I must apologise for encroaching to so great an extent upon your space and forbearance. I trust that your correspondent "A Would-be Bee-keeper" will not look upon these words of encouragement as an impertinence.

"Stranger, if you passing meet me, and desire to speak to me, why should you not speak to me? And why should I not speak to you?"—SIMPLE LIFE, Johannesburg, August 21.

Echoes from the Hives.

Herts, September 10.—I have taken one and a half cwt. of honey this season, like sample. I had two hives in the spring, and one having sent out a swarm, it was hived on nine frames, and fed for a few days. The bees did well, but I could not get them to work in sections, and, therefore, tried them with a box of six shallow-frames of drawn-out comb on July 25, and they took to these and partly filled and sealed them. But swarms have not done very well here this year, several bee-keepers I know of having failed to get any surplus from them. I started bee-keeping about five years ago, and find much pleasure in working among the bees, while I manage to get a balance on the right side. I also have the bees to manage at the place where I am employed as gardener, and being away all day, I cannot manage a large apiary of my own, as I should like to. All my knowledge of bees has been gained from the "Guide Book" and your weekly and monthly journals, and I find the questions asked by others very often answer for myself.—J. GRAY.

Queries and Replies.

[3893.] *Are Queens Mated in Autumn?*—I should be glad of your advice in the following case: — I purchased an "Extra Golden" virgin queen a fortnight ago, and introduced her safely. I have seen her flying about on August 29, 30, and 31, and this makes me ask: 1. Do virgins leave the hive daily before they are mated? Also 2. Do they come out at all after being fertilised? 3. Should be glad to know if there is still any chance for her being mated when there are only a few drones left in the colonies? Your reply will oblige.—LLANELLYITE, Carmarthen, September 5.

REPLY.—1. Virgin queens usually mate in summer if weather be favourable—within a week after hatching out, sometimes in four or five days. 2. They take daily flights if weather suits until fertilised. 3. There is still a chance of mating so long as drones on the wing; but it is far from certain that the queen in question will be fertilised in such weather as we are now having.

[3894.] *Bee Parasites.*—1. Can you tell me the particular reason why the black queen sent is unprolific, and give me an idea of her age? 2. By examining you will see that there are no less than nine reddish-coloured parasites on her body; would this hinder her fertility? 3. Can you say how long the tiny insects live, as the stock in question was put into a new hive last autumn, and nearly all my bees are now affected in the same way, although I use carbolic solution when manipulating? — W. A. T., Honiton, September 6.

REPLY.—1. The queen (dead when received) has the appearance of being fairly old, and has no doubt been rendered less prolific than usual by continued worrying caused by the parasites, which are known as *Braula coeca*, or blind lice. 2. The *Braula*, fortunately, does not live long in this country, our winters being too cold for it.

[3895.] *A Lady Bee-keeper's Queries.* — Kindly answer the following in B.B.J.:— 1. What can I do with a lot of new sections that I have already filled with new comb foundation? Can I safely store them, as they are in a dry place, till wanted next season, or will the foundation spoil and get mouldy? 2. What is best to do with a large number of half-finished sections, as I fear my bees will not do any more work or finish them now, and I suppose, being under weight, I cannot sell sections like this? 3. Had I better buy an extractor? 4. Is it too late to advertise in B.B.J. that I have nine dozen good sections of honey for sale? 5. Ought I to unite my weak stocks? as the bees swarmed no less than nine times, in spite of cutting out queen-cells and other precautions; and although last year I began bee-keeping with only four hives, I now have eleven. I never saw the swarms issue, or could, of course, have returned them to the parent hive. I should be most grateful if you would give me your advice.—A. K. S., Weymouth.

REPLY.—1. Wrap them up carefully in paper so as to keep out moths and dust, and store them in a dry warm place. 2. Put them through the extractor at once, and give the wet combs to the bees to clean up before storing away. Do not give them to the bees till dusk, in order to avoid risk of starting robbing. 3. Yes; no outfit is complete without one. 4. No; good sections are still in demand. 5. Yes; weak stocks are not worth trying to winter singly.

[3896.] *Bees Failing to Transfer Themselves.*—Will you kindly advise me on the best mode of wintering my bees? I obtained an established stock in a skep in May last, and put same over a frame-hive containing fully drawn-out comb, in accordance with instructions contained in "Guide Book." I have examined the hive on several occasions since—the last time as recently as Saturday, August 26—but although there were plenty of bees in lower hive, no attempt has been made to store honey, nor has the queen gone down. What had I better do? Winter the bees in skep? If so, should skep remain over frames? Should bees be fed, and, if so, how? as, of course, feeding from above with skep is impossible, there being no feed-hole in top. —WORKER BEE, Birmingham.

REPLY.—The failure of the bees to transfer their brood-nest below has, no doubt, been caused by either paucity of bees or the scantiness of the honey-crop in your district. Under the circumstances we advise wintering the bees in skep, as they are now established therein, and any stores they may have will probably be sealed over. If the queen is worth anything at all the brood-nest will be established in frame-hive early next year.

Bee Shows to Come.

September 14, 15, and 16, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, etc. Twenty-five classes (ten open to all). **Entries closed.**

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 27, at Altrincham.—Annual Show of the Altrincham Agricultural Society. Good Money Prizes for Honey, along with Silver and Bronze Medals of the Cheshire B.K.A., and others. Open Class for Frame-Hive (unpainted). Schedules from J. Herbert Hall, 2, Dunham Road, Altrincham. **Entries closed.**

October 3 to 5, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances, Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries close November 1.**

Notices to Correspondents & Inquirers.

R. H. C. (Lancashire).—Buying Driven Bees. — Insuring Hives. — We cannot publish your letter *in extenso*, because in our opinion, neither of the complaints made therein are quite justified. With regard to the first, we invite your attention to the wording of advertisement in question, which you do not quote correctly. There is no mention whatever of bees being "put on rail same day as order received," nor is any specific weight of bees stated. In view of this it is hardly surprising that the seller should take the trouble to reply to your somewhat hasty threat of "exposing him." On the question of insuring bees, your complaint against the secretary of your county association should be addressed to the chairman, not to us. But if you will take the trouble to acquaint yourself with the details of the insurance scheme and the method of working, you will find that no acknowledgment of each sixpence received from yourself and friend is required; nor is a separate policy made out and supplied to each insurer, as the small amounts would be swallowed up in costs if dealt with singly.

E. H. (Bedford).—Covers for Hive-roofs. —There is no particular objection to covering leaky roofs with felt, if the hard asphalt kind is used, and it may have a coat of whitewash in the hot summer-time. The soft, thick tarred felt that holds moisture after exposure is unsuitable for the purpose. But the most reliable covering is thin sheet-zinc.

F. J. T. (Tring).—Forming County Associations.—A few years ago Herts had one of the best county associations in England, and no doubt if the right sort of man could be secured for secretary, it might be the same now. Can you suggest a name? If so, we will see that your request is attended to.

Ayrshire Beginner (Bankhead).—Storing Sections.—An airy, dry cupboard near a fireplace, where a temperature of between 60 and 70 deg. Fahr. can be maintained, is the best place for preserving honey-sections from granulating. In some years, however, granulation will take place in spite of every precaution.

E. W. S. (Upton-on-Severn).—Varieties of Heather. — The one you term "large bell" is the *Erica cinerea*, or bell-heather; the "small bell" is *Calluna vulgaris* (common ling). The last-named is by far the best flower of the two for honey.

'Tomey" (Middlewich). — Non-swarming Hives.—Without knowing what hive you refer to as having "a drawer of shallow-frames in bottom," we cannot safely say how the "drawer" is intended to be used. The inference is, however, that your reference is to a non-swarming hive, which is much less suitable for a beginner to start with than one of more simple construction.

W. E. E. C. (Ipswich). — Iron Honey-valves. — We advise your having the honey-valve tinned before screwing it into the cask, as honey in direct touch with iron becomes discoloured.

A. McA. (Glasgow).—Comb-foundation.—Of the five samples sent, we prefer No. 3 for supers and No. 5 for brood. No. 2 is rather thin for brood, and No. 4 for supers is the nearly white bleached wax which bees often refuse to work on for some reason.

W. H. B. (Walthamstow).—Sugar for Bee-food.—1. Raw Demerara sugar is quite unsuitable for bee-food, as is also any sugar made from beetroot. There is no difficulty in obtaining pure cane-sugars (see advertisement of same in B.B.J.).

Constant Reader (Kilmaurs, N.B.).—If you are proposing to build up a stock for wintering with driven bees, not less than 3 lb. of bees should be obtained.

H. C. Smith (Cirencester).—Bee-forage.—Flowers sent are those of the *Scabiosa succisa* ("Devil's Bit"). It yields both honey and pollen.

Honey Samples.

H. F. (Chichester).—Your sample consists mainly of honey-dew, and as such is unsuitable for table use.

J. G. (Herts).—Sample is free from clover, and quite good enough for the show-bench.

Suspected Comb.

Sussex Downe (Brighton).—Foul brood is rapidly developing in comb sent.

******* *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

THE GROCERS AND KINDRED TRADES' EXHIBITION.

HONEY SHOW AT THE AGRICULTURAL HALL.

The thirteenth annual Exhibition and Market of the Grocery and Allied Trades, held at the Agricultural Hall, London, was opened on Saturday last, the 16th inst., and continues till the end of the present week. Favoured with fine weather, as it has been so far, we doubt if any of its predecessors has equalled this exhibition for extent or for all-round excellence, while the section in which bee-keepers will feel most interest greatly surpasses anything previously seen at the "Grocers'."

The display of bee-produce is set up in the centre of the left-hand gallery when looking towards the clock in the great hall, where first are seen six handsome honey trophies, followed by a single line of staging, the length of which may be judged when we say that of extracted honey alone something like 1,800 jars were seen. The eleven classes into which the competition is divided are open to all British bee-keepers, and the amount offered in cash prizes for honey far exceeds that of any honey show in the kingdom, while the entry fees are merely nominal. In view of this, it was highly satisfactory to see so fine a display, and the whole admirably staged by Mr. Wm. Herrod, who will no doubt receive well-deserved credit for the way he got through a very onerous task. Amid so much that was worthy of notice, and the almost equal merits of the winning exhibits, we need not particularise, but it was regrettable to see several capital exhibits disqualified through carelessness on the part of exhibitors in not complying with rules. We hope to refer again to this; meantime, it is satisfactory to see that good British honey is brought to the notice of many thousands of consumers every year by means of these important London shows.

Mr. W. Broughton Carr, London, and Mr. Walter F. Reid, Addlestone, Surrey, officiated as judges, and made the following

AWARDS.

Display of Honey (comb and extracted) and Honey Products, shown in suitably attractive form for a tradesman's window (6 entries).—1st (£4 and B.B.K.A. Silver Medal), C. W. Dyer, Compton, Newbury; 2nd (£3), J. Waddell, Alwinton, Northumberland; 3rd (£2), J. Pearman, Penny Long Lane, Derby; 4th (£1), E. Wise, Henley-on-Thames; c., H. Davidson, Beecroft, Basingstoke.

Twelve 1-*lb. Sections* (26 entries).—1st (£1 10s. and Bronze Medal), C. W. Dyer; 2nd (£1), J. Waddell; 3rd (10s.), F. W. Woodley, Compton, Newbury; 4th (5s.), G. Hunt, Newark; 5th (2s. 6d.), E. Wise; h.c., F. Hancox, Steeple Aston; h.c., J. Goldhawke, Reymerston, Norfolk; h.c., Mrs. Sopp, Crowmarsh, Wallingford, Berks; h.c., J. Boyes, Cardiff.

Twelve 1-*lb. Heather Sections* (15 entries).—1st, J. M. Balmbra, Alnwick; 2nd, J. Waddell; 3rd, H. Waddington, Boroobridge, Yorks; 4th, Jones Bros., Andover; v.h.c., J. Pearman.

Three Shallow Frames Comb Honey for Extracting (7 entries).—1st (£1 5s.), F. R. Ford, Burwell, Cambs; 2nd (£1), E. Wise; 3rd (15s), G. T. Lynds, Longfield, Kent.

Twelve 1-*lb. Jars Light-coloured Extracted Honey* (64 entries).—1st (£1 15s. and B.B.K.A. Certificate), J. Waddell; 2nd (£1 5s.), T. G. Hillier, Hurstbourne Tarrant, Andover; 3rd (15s.), A. Young, Chatham; 4th (10s.), R. Wiliams, Llangwyllog, Anglesey; 5th (5s.), S. Cartwright, Shawbury, Shrewsbury; v.h.c., L. Quayle, Glenmay, Isle of Man; C. Bocock, Newmarket; Miss Batten, Alton, Hants; J. Kerr, Dumfries, N.B.; and A. Fox, Bardsea, Ulverston; h.c., W. Cook, Binbrook, Lincs.; and W. H. Williams, Llandon, Glam.; c., J. Cragg, Garstang, Lancs.; Jones Bros.; and R. Morgan, Cowbridge.

Twelve 1-*lb. Jars Medium-coloured Extracted Honey* (43 entries).—1st (£1 5s.), A. Young; 2nd (£1), G. Hills, Comberton, Cambs; 3rd (15s.), Miss Willan, Hanley Castle, Worcester; 4th (10s.), J. Herrod, Trentside Apiary, Sutton-on-Trent; v.h.c., W. E. Hyde, Ledbury, Herefordshire; h.c., G. T. Lynds; c., J. R. Freeman, Westerham, Kent.

Twelve 1-*lb. Jars Dark-coloured Extracted Honey* (13 entries).—1st (£1), G. Hunt; 2nd (15s.), J. Jones, Wegber Quarry, Carnforth, Lancs; 3rd (10s.), E. Wise; h.c., C. Jones, Knowle, Bristol; c., J. R. Freeman.

Twelve 1-*lb. Jars Heather Honey* (8 entries).—1st (£1), J. Waddell; 2nd (15s.), W. G. Walton, Windermere; 3rd (10s.), G. T. Walden, Pirbright, Surrey; v.h.c., A. Brightwell, East Liss, Hants.

Twelve 1-*lb. Jars Granulated Honey* (10 entries).—1st (£1 5s.), J. Herrod; 2nd (£1), E. Wise; 3rd (15s.), J. Pearman; 4th (10s.), A. Young; v.h.c., F. Harper, Uttoxeter, Staffs.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Package, suitable for retail counter trade (13 entries).—1st (£1), Mrs. Harris, High Ferry, Sibsey, Boston; 2nd (15s.), G. Hunt; 3rd (10s.), J. Berry, Llanrwst, N. Wales; 4th (5s.), C. Dunn Gardner, Fordham Abbey, Soham, Cambs.

Beeswax, judged for quality of wax only (17 entries).—1st (£1), A. Young; 2nd

(15s.), F. W. Frusher, Crowland, Lincs; 3rd (10s.), J. Pearman; 4th (5s.), B. T. Kingsley, Dorking, Surrey; h.c., E. Wise; and H. B. Eaton, Sandbach, Cheshire; c., C. Dunn Gardner; and Miss Ratcliffe,

HONEY-SELLING CLASSES.

Extracted Honey in Bulk—by Sample with price (3 entries).—Certificates of Merit awarded to G. Hills, and W. J. Farmer, Redruth, Cornwall.

Extracted Honey in 1-*lb. Jars—by Sample with price* (4 entries).—Certificates of Merit awarded to J. Platten, Melton Constable, Norfolk; J. Pearson, Bedale, Yorks; and A. Brightwell.

Comb Honey in Sections—with price per dozen.—No certificate awarded.

BERKS BEE-KEEPERS' ASSOCIATION.

ANNUAL SHOW.

The annual honey show was held in the Torbury Gardens, Reading, on August 30, in connection with that of the Reading Horticultural Society (which society subscribed £5 towards the prize fund). A fine display of honey was staged under the direction of the hon. sec. The judges were Mr. W. J. Stoneham, Windsor, and Mr. H. Edwards, Sunningdale, whose awards were as follows:—

Honey Trophy (*Members only*).—1st, H. W. Seymour; 2nd, A. Canning; 3rd, C. W. Dyer.

Twelve 1-*lb. Sections* (*Open*).—1st, H. W. Seymour; 2nd, W. Woodley; 3rd, A. Canning.

Twelve 1-*lb. Jars Extracted Honey* (*Open*).—1st, H. W. Seymour; 2nd, C. H. Bocock; 3rd, Miss Wood.

Twelve 1-*lb. Jars Granulated Honey* (*Members only*).—1st, H. W. Seymour; 2nd, C. W. Dyer.

Twelve 1-*lb. Sections.*—1st, C. W. Dyer; 2nd, W. Levington; 3rd, H. Witt.

Twelve 1-*lb. Jars Extracted Honey.*—1st, G. W. Davies; 2nd, W. Walker; 3rd, C. W. Dyer.

Twelve 1-*lb. Jars* (*Dark*) *Extracted Honey.*—1st, W. Spanswick; 2nd, F. Hamblin; 3rd, — Meadowcroft.

Six 1-*lb. Sections.*—1st, G. Crocker; 2nd, F. Chapman; 3rd, E. Beck.

Six 1-*lb. Jars Extracted Honey.*—1st, G. Crocker; 2nd, T. Wise; 3rd, F. Chapman.

Silver Medal for Highest Number of Points.—H. W. Seymour.—D. W. Bishop Ackerman, Hon Sec. Berks B.K.A.

LANCASTER AGRICULTURAL SOCIETY.

HONEY SHOW AT LANCASTER.

In connection with the Lancaster Agricultural Society's forty-second annual show, held at Lancaster on August 23, the honey section, tried for the first time in 1904, more than justified its inauguration a year ago. Arranged, as it was, in a tent devoted to bees and bee-produce only, the display of honey was so large and of such excellent quality as to surprise all who saw it, and it is hoped that in future years the bee-department will be one of the strongest features of the show.

Dr. Jones, Freckleton, judged the exhibits, and made the following awards:—

OPEN CLASSES.

Six 1-*lb. Sections* (12 entries).—1st, A. W. Weatherhogg, Wiloughton, Lincs.; 2nd, D. W. Barnes, Coniston, Lancs.; 3rd, Wm. Clark, Grange-over-Sands.

Six 1-*lb. Jars Extracted Honey* (26 entries).—1st, F. Sharples, Rainhill, Liverpool; 2nd and 3rd, J. Jones, Wegber Quarry, Carnforth.

Six 1-*lb. Jars Medium-coloured Extracted Honey* (15 entries).—1st, E. C. R. White, Newton Toney, Salisbury; 2nd, Miss Carradas Wray, Lancaster; 3rd, F. Walker, Esthwaite, Hawkshead.

Beeswax (16 entries).—1st, E. C. R. White; 2nd, F. Harris, Sibsey, Boston, Lincs.

LOCAL CLASSES.

Six 1-*lb. Jars Extracted Honey* (21 entries).—1st, Wm. Clarke; 2nd, Wm. Black, Ashton.

Trophy of Honey and Bee-produce (3 entries).—1st, Wm. Lloyd, Skerton, Lancaster; 2nd, Jas. Gorst, Middleton Brow, Heysham.

SPECIAL PRIZES.

Silver Medal.—D. W. Barnes; Bronze Medal, Wm. Clarke.

Dr. Jones gave an interesting lecture with bee demonstrations in the tent during the afternoon, which was well attended.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

ROBBING.

[6021.] The accounts of wars and rumours of wars found in ancient bee-books would fill the heart and mind of any but a seasoned human with fear and dread. Several make

it appear, indeed, as if strife and contention were the very breath of a bee's nostrils, and that mainly for warfare did bees harbour up their strength and energy. Now, in a well-regulated apiary robbing is almost a lost art, and an unknown quantity. We have got to know bees and their ways so intimately that we have dealt a blow at the root cause of their depredations. Cause leads to effect. Remove the cause and you fail to secure the effect. Feed bees at the right time, in the right way, and to the proper extent, and you eliminate the chief leading motive for those illegal predatory excursions which so upset the peace of the apiary and the peace of mind of the apiarian. But lest some forget, and bees needs must when want drives on to cateran raids, it is advisable to supply some cures, or, at least, checks or hindrances. If the intruders are not your own, but real invaders, you can fold your hands and look on confident that a strong stock, well provisioned, will repel all attacks. But no true lover of the bee would stand silently by and see even strange bees slaughtered thus, as he would likely get out a watering-can, with a good rose, keeping it pretty actively engaged deluging the robbers until he took all the heart out of them. A garden syringe, with a full force of water carried by gravitation, would cost him less waste of energy. Some rags dipped in carbolic solution hung above and around the entrance, with a spray-shower of the same solution all over flight-board, will generally make the robbers call a halt, while it will very slightly inconvenience the bees of the hives. If a strong hive is worrying a weak one, an interchange of hives will do good and stop the fray. If the hive is of the "combination" type, close up the front, push frames well back, contracting the brood-nest, and leave an ante-room in front open, but covered with wire-cloth to secure ventilation. Confined thus, the bees suffer no harm if not extra strong. The robbers after some hours will desist.

All cracks in floor-board, openings of plinths, ventilating holes, should be made bee-proof. No syrup should be spilled when feeding, no pieces of honey-comb should be left lying about, all feeders should be carefully wrapped up, and, above all, stocks should be kept strong and well provisioned. A bad case may be cured as follows. Remove the hive attacked to some shed or outhouse, giving the bees ample ventilation. Allow the robbers free entrance into a new hive on the old stand, supplying them with very weak syrup. When they have had some of this, dilute it until it is little more than sweetened water. They soon give up in disgust, and, next day, the colony may be safely restored to its old stand. Prevention, however, is better than cure, so have all stocks strong in order that they may withstand invasion. Supply all with ample stores and they will have no desire to rob. The instinct, once begot, is sometimes rather difficult to allay, as "stolen waters are sweet"—especially sweet stolen waters.

The trouble is sometimes caused by untimely manipulations, and then when much smoke is used, colonies are in the very worst form for withstanding any combined or persistent attack. Avoid the use of much smoke, do not leave tempting sweets about, do not have weak colonies, and do not manipulate unseasonably, because prevention is better than cure. Here is the newest tip I have seen in the way of curing. It sounds as if there was something in it, so some of those afflicted with the robbing mania might give it a fair trial:—"As a means to prevent robbing use cheese cloth. It is very cheap and durable. Envelop the hive with it, and in ten or fifteen minutes open the cloth at the top to allow the robbers within to escape, and then close it again, repeating the operation about every ten minutes until all have escaped. The home bees are allowed to enter at sundown, though it is better to leave the cloth on for twenty-four hours, if robbing has been persistent. If, however, the cloth was put on when robbing first began it may be removed within an hour, as the colony will then have recovered from their disorganisation."—D. M. M., Banff.

FINDING QUEENS.

[6022.] Hard as it may be to say anything fresh on so worn a subject, being able to find the queen is of such supreme importance, that I am tempted to risk repetition, if only in the interests of the new-comers who yearly join our ranks, and to whom the wisdom stored in past volumes of the B.B.J. is not easily accessible. I will confine myself, as far as possible, to points not usually enough considered.

First, an accurate mental idea of the queen's appearance in whatever position she may present herself to the eye is indispensable. This can best be acquired with the help of an observatory hive. Viewed from above, in three portions of her body she differs notably from a worker, and a glimpse of any one of these portions, the rest of the body being hidden, as it well may be by crowding bees, should suffice for recognition. These are:—The pointed abdomen projecting well clear of the wings; the longer, stronger, and differently-shaped legs; the hairless and shining dorsal thorax. Workers have this part covered with hair. In queens it is always bare, and, consequently, dark and glossy. Though seldom noted, this pecu-

liarity is important, for it enables you to pick out the queen at once, even when the lower part of the body is buried in a cell in the act of laying, or otherwise hidden. On the lower side of the body, the brighter colour of the abdomen, and especially of the legs, as well as their shape, should suffice.

In driving a skep, be as gentle as possible. It is only as a preliminary and to induce the bees to fill themselves that intimidation is necessary. A frightened queen tries to hide, and the bees often assist her. The plate, "Driving Bees," in the "Guide Book," shows at what angle to fix the skeps, and where to tap with the hands. The front hand drives the bees towards the point of ascent, the other gently impels them upwards; any other way is disadvantageous and confuses the bees. Regulate the upward flow, do not hurry the bees up, nor allow them to hang in one spot. As one sentinel cannot guard a wide entrance, so the eye cannot properly watch a long line; therefore, do not let the ladder get too broad. A clumsy big-eyed skewer makes a bad hinge; a bradawl, which I lately saw used, is worse. In the event of your having to make a plunge for the queen, such impediments may cause a failure. Nothing is better than a sharp-pointed 2½in. brass-headed nail.

Should the queen be observed on the combs passing upward, do not attempt to seize her from above, or she will be almost certain to escape and run down again. Let her pass up just high enough to allow of taking hold of her from behind.

When dealing with a strong colony if the queen has been missed and you cannot see her in the removed upper skep, shake out about half the bees on to the board, and the rest as soon after as you conveniently can. If only a few are shaken out, some may take flight and the queen with them, especially if smoke be used to drive the bees in—which I do not recommend.

According to Thomas Wildman, a mighty bee-master of the middle eighteenth century, and worthy of belief, when a skep is first inverted (as for driving, but I imagine without previous intimidation), the queen always runs up to see what is amiss. A quick eye and long practice enabled him to secure her on the spot. Féburier, author of a very able treatise, Paris, 1810, also believed that the queen runs to the supposed seat of danger. He used a hive which could at will be divided laterally into two portions. Before dividing for artificial swarms, he used to tap on the side where he desired to retain the queen, so as to attract her there. I have myself occasionally seen the queen come up to the top of an inverted skep and go quickly back again, and can believe that by quickness of hand and eye she might be secured, but only those well accustomed to handle queens should make the attempt.

On searching through a frame-hive, when you lift out a frame for inspection, at once run your eye round the edges, and do the same on reversing it. Otherwise, while you are gazing at the middle part of the comb, the queen may beat you by popping through some gap or round the edge. If you fail the first time and decide to try back, remove altogether the first two or three frames after well examining them, so as to leave a clear space on the sides of the hive and on the floorboard. In spring or autumn a box should be provided in which to place them.

In the delicate operation of queen-catching a veil is a decided encumbrance. By all means have one at hand, but even if worn at the outset, it should be thrown back or dispensed with as soon as the temper of the colony has been tested and found satisfactory.

Lastly, and once more, be gentle. Never hurry; it is better to lose a few minutes than to miss the queen.—H. J. O. Walker, Lieut-Col., Leeford, Budleigh-Salterton.

BEES AND MARTINS.

[6023.] I notice in the Bee Journal of September 14 (page 365) some correspondence regarding bees and swallows. I may say that I am a bee-keeper, and have had as many as thirty hives near the house, and although there has been a large colony of martins on the house, and a number of swallows' nests in a shed near by, I have never noticed either birds molesting the bees in any way, although I have watched them carefully. I am quite sure that swallows and martins do not eat bees, but occasionally a young bird will snap up a bee, but seldom does it a second time. These birds are certainly not enemies of bee-keepers, and no one need fear having a colony near their hives.—Oliver G. Pike.

P.S.—I am always interested in the Bee Journal, and look forward to it each week. I always recommend novices in bee-keeping to take it in, as they can learn so much from its pages.

[We are glad to have the experience of so close and gifted an observer of bird life as the author of "In Bird-land." Nor are we less pleased to learn of his love of bees and bee-keeping.—Eds.]

A VILLAGE BEE-CLUB.

[6024.] A brief account of our "Hayes and Hillingdon Village Bee-club" may, I hope, serve the double purpose of interesting your readers, and of stimulating other

experienced bee-keepers to form similar small associations in their districts.

The objects we set before us are the following:—(*a*) To give information to the members about bees and bee-keeping; (*b*) to afford mutual advice and help in apicultural difficulties; (*c*) to purchase appliances at wholesale, or otherwise advantageous, prices; (*d*) to circulate among members copies of the B.B.J.; (*e*) to assist one another in the disposal of bee-produce.

Our meetings have been held bi-monthly, beginning October 25, 1904. At the first, after the inaugural proceedings, members rendered an account of their "takes" of honey during the preceding season. At the second, I gave a half-hour's lecture on bee-pest. At the third, arrangements were made for the purchase of such appliances as the members considered they would want during the coming season. A resolution was also passed for the affiliation of the club with the Middlesex B.K.A.

At the April meeting subscriptions to the County Association were paid. Names were entered for the visits of the expert of that association, and members stated definitely the kinds and amounts of appliances they required. At the June meeting, cases of bee-pest were reported. Advice was given for the general and specific management of stocks, and the right and wrong ways of fixing "foundation" were practically shown. At our most recent meeting (August 22), accounts were presented to the members of their indebtedness to me for the apparatus they had had—I having acted as depot-keeper for the club. A record was taken of the honey-harvest so far secured, and recommendations were made about the removal and disposal of supers till next year. Advice was also given for the examination and management of stocks in view of the approaching autumn and winter.

Of course, at each meeting, conversation took place on many points which occurred to members to bring forward.

As our expenses are almost *nil*, we have no entrance-fee or annual subscription. Our membership numbers thirteen or fourteen, but we expect an increase as time goes on. Other benefits than those immediately connected with bee-keeping manifestly result from the good-fellowship induced. The direct and indirect advantages are, indeed, sufficient reasons for my strongly advocating the formation of many similar clubs. They should become feeders and auxiliaries of county associations, and must promote sound principles of bee-keeping in our urban and rural districts. —W. H. Harris, Hayes End, Middlesex, September 15.

[It need hardly be said how completely we are in accord with our esteemed correspondent regarding the usefulness of village bee-clubs as auxiliaries of county B.K.A.s. Indeed, if an experienced bee-keeper — possessed of half the ability of Mr. Harris—can be found willing to take on the direction of affairs and give the requisite time to the work, the village club will be in the highest degree helpful. But, as in the case of our county associations and their secretaries, it again brings home the fact of how much of success or failure depends on getting the right man in the right place. On the other hand we are pleased to mention, as a coincidence, our having already in type, for publication in the next issue of our monthly *Record*, an interesting article suggested by a letter —giving, on page 134 of September *Record*, an account of the Dunchurch Village Bee-club—in which the writer deals with the subject in a thoroughly practical manner from a business standpoint. The object aimed at is to assist cottagers and artisans in securing the advantages of co-operation and the benefits obtainable from bee-keeping when pursued intelligently on modern lines.—Eds.]

UNITING BEES.

EARWIGS EMPTYING SUPERS.

[6025.] In contrast to article headed "Bees Refusing to Unite" (No. 6014, page 366), I may state that I was asked to drive a queenless lot of bees on September 12—a very cool day. This lot had a stock on each side of it, and my custom in such cases is to block the entrances of all hives except that about to be driven, as a precaution against robbing and stinging. I drove the bees in order to see if there was a queen, but the moment I turned the skep over the bees began to take wing and flew to the side hives, and eventually as many bees were trying to unite to their neighbours as ran into the top skep. This has been my experience on several occasions. I have found it to be a good plan —when the queen has been taken from a driven lot, to place her in a perforated queen-cage on the floorboard of the hive that has been driven, for, if the driven lot has been queenless for any length of time, and there is a stock near by, a procession will most probably be formed from one to the other and the bees will unite of themselves quite peacefully, usually to the discomfiture of the "driver." I have also noted that when a stock, whose drone-breeding queen has been removed, is united to another stock, the drones are killed off the following day. This helps one to prove the existence of a queen for the combined lots. One of the best methods of starting queen-cells—according to my experience—is by means of a queenless lot; that is, by inserting a frame of eggs into the centre of the colony. By uniting a queenless lot

to its neighbour we obtain our strongest stocks.

Referring to the question, "Do earwigs empty honey from the comb?" I may state that it can be clearly demonstrated that they do, if, say, a pound section be placed at night where earwigs congregate. I have had many sections spoiled by earwigs, who first empty the uncapped cells and then uncap and empty the other cells. Of course, it will take a great number of earwigs to empty a pound section, but given plenty of earwigs and plenty of time, I will venture to state that honey cannot be kept within their reach. Nor will they then be satisfied, as they are almost as voracious as the wasp, the bodies of dead bees and other insects being consumed till there is only the outside skeleton left. Earwigs will help themselves to honey stored in the combs away from the cluster of bees; therefore, keep your stocks strong. But earwigs will shortly have their season of rest, a few frosty nights being sufficient to send them over to the majority.—T. W. Swabey, Bracebridge Heath, Lincoln.

QUEENS "PIPING."

[6026.] With reference to query re queens "piping," by T. Alun-Jones in last week's B.B.J. (6019, page 367), I may say that on May 26 last I took two frames of brood and bees, without queen, and put them into an observatory hive along with two frames fitted with comb foundation (I sent you photo of this hive some time ago). The bees hatched out a queen on June 8. Next day I heard "calling." I was from home on two following days, but returned on June 12, and at 9.40 a.m. on that day the hive was in the throes of swarming. The inside of hive was like a seething cauldron, and each individual bee seemed almost demented. After a large majority of bees had cleared out, I soon spotted the mother queen—she was rushing about the hive, and pausing continually to "pipe." Observing closely, I came to the conclusion that the "piping" sound was caused by rapid but very restricted vibration of the wings. I examined the small swarm which came off, caught and removed queen, and allowed bees to return to the observatory hive and join the second queen. This latter queen took a mating flight on June 15 at 3.20, was out of hive for over two minutes, but on her return did not appear to have been mated. The first eggs were laid on the 28th, and she had bred a lot of bees up to August 1, when I united them with a second swarm of June 17 to take to moors.

On June 28 I put a frame of hatching brood ("Golden Prolifics") into observatory hive, which contained black bees only. These "Golden Prolifics" were flying freely the third day after. Is not this sooner than usual date as given in "Guide Book"?

The heather season here has been a comparative failure. First (or prime) swarms have done best. The brood-chambers required a good deal of filling up at the heather, as the flower honey-flow here ceased about the beginning of July owing to drought. The heather season has on the whole been cold and windy.—"Carbon," Co. Durham, September 16.

[It is for you to explain the extraordinary precocity of "Golden Prolifics," if they can be inserted in an observatory hive as "hatching brood," and "flying freely" less than three days afterwards. We rather think it will be found that some bees have been introduced along with the frame of brood, or else bees from the parent hive have found the observatory. It, therefore, need not shake your faith in the teaching of the "Guide Book," which is not in fault.—Eds.]

VISIT TO A DUTCH APIARY.

[6027.] I am driving in a carriage along a typical Dutch road, leaving behind Haarlem, with its fine church and famous organ, and coming towards Santpoort, where is situated the apiary of one of the oldest bee-keepers in Holland, Mr. Kelting. The drive lasts about half an hour, and I, along with a friend, find myself in one of the most prettily-arranged apiaries I have ever seen, consisting of various kinds of hives—some placed under cover, others standing in the open in two long rows, each hive a few feet from its neighbour—and all these in a garden the condition of which showed that its owner was a skilful gardener. I cannot speak Dutch, but the friend who accompanied me speaks both Dutch and English, and acts as interpreter, telling me what he learns in answer to my questions or what information of interest is volunteered by Mr. Kelting.

I learnt that Mr. Kelting had been a bee-keeper—and evidently an enthusiastic one—for forty years. Starting it at first only as a hobby, it has developed into a large and lucrative business in honey and bee-appliances. Mr. Kelting has nearly a hundred colonies of bees in hives of various kinds, including some curiously-shaped skeps and frame-hives, but, after a long and varied experience, he found that the British form of frame-hive was the best. I saw several kinds of frame-hive, but what interested me the most were some skeps fitted with movable frames fixed in by means of metal pins. They are on what is called the "Gravenhorst" principle, and might well be used in England by those who do not care about going to the expense of a frame-hive. The bees of this apiary

are mostly of the same type as our native British bee, but I did see a few Italians. Mr. Kelting, like many other Continental bee-keepers, makes his own comb-foundation with a Mietsche hand-press; the foundation thus produced being thick, the frames are only wired when very large. The honey extractor, I think, was a German one. The honey, when extracted, was stored, not as in England in metal receptacles, but in large wooden butts. The average take of this apiary will make British bee-keepers envious. It is from 120 to 140 English pounds per hive, and as much as 200 English pounds have been taken from a single hive. The apiary is worked chiefly for extracted honey, which is retailed at 85 cents, or 1s. 5d. per pound.

Mr. Kelting informed me that they had no foul brood in his country.

Rain beginning to come on, my visit had unfortunately to be cut short, but I left with the assurance that British bee-keepers are by no means behind those of the Continent, but, as in some other things, lead the way.—HERBERT NEWMAN, Hon. Sec., Bishop's Stortford B.K.A., Brent Pelham, Herts, September 13.

[It may be well to say that Gravenhorst's hive, mentioned above, is known in Germany as the Bogenstülper (Bogen, an arch). It is described and illustrated in the B.B.J. of September 12, 1889, but has never found favour in this country, though deservedly popular with the peasant bee-keepers of Germany, whose honey is almost wholly obtained from heather.—EDS.]

SENDING HIVES BY RAIL.

A RISKY JOURNEY FOR THE BEES.

[6028.] On the morning of September 15, noticing an unusual amount of activity among my bees, and by some evidence of fighting going on at hive entrances, I knew there must be a reason for the upset plainly observable. I had heard overnight of there being a consignment of bees in wood hives standing in an open truck at our railway goods-station, about half a mile from where my bees are located, and had been there since the 12th inst. Moreover, several of the hives were upset and broken, and, as a natural consequence, the bees were considerably active. The railway people, not knowing what to do in the matter (as the consignment was refused by the consignee), kindly (?) moved the truck and contents to the end of a siding within fifty yards of my apiary, and here they remained in the full sunshine for two days. I at once made known to the officials the danger likely to arise from this action, as there was a public main road running between them and my hives. They were removed—what was left of them—bees and hives being returned to the sender on Saturday, the 16th inst., a distance of about seventy miles. In this way, the unfortunate bees, in such of the hives as were not broken, had been confined from the 12th till the 18th, six days, which, I think, a very cruel way to treat the bees after their hard summer's work.

Should the above particulars possess sufficient interest for inserting in B.B.J., it might be useful in drawing attention to the risks of sending hives by rail if not properly packed.—J. C., Somerset, September 18.

HELPING BEGINNERS.

[6029.] If your correspondent, "A. H. D., Birmingham," who writes on page 367, will communicate with me and give me the name of place where he intends locating the bees, I will give him every assistance as regards suitability of pasture, etc.

As expert of the Staffs. B.K.A., I have visited many members in and around Birmingham, and know the district well.—JOSEPH TINSLEY, Chebsey, Eccleshall, Staffs.

RAISING QUEENS AND INCREASE.

[6030.] I have been induced by a friend to give to readers of the B.B.J. the results of an experiment tried by myself as an easy way to rapid increase without having to interfere with ordinary stocks for the supply of nuclei. Early in the autumn of 1904 I had a couple of lots of driven bees given me for the driving, and, as no ordinary hive was available, put them into two nucleus boxes which each held six frames, measuring 6 in. by 5½ in. These little combs were quickly filled with good syrup, and on October 1, when the final examination for the year was made, each had four of the combs well filled with sealed food, while the other two frames had patches of brood on each. Both came through the winter in first-class condition, and threw swarms during the last week in April of from 1 lb. to 2 lb. each. These swarms were each divided into three lots, and placed in miniature hives holding three of the tiny combs, 6 in. by 5½ in., such as I generally use for queen-rearing, and those without queens had ripe cells given them from the parent stocks. The resulting queens were all mated and laying by May 14, and by the same date in June each little lot was so crowded that the combs were carefully transferred into standard frames, which had the surrounding space fitted with good new brood foundation, and put into ordinary hives. Now, on September 16, they are going into winter quarters, each on six standard frames with a good store of honey and syrup. The two lots swarmed several times during the season, and those which

came off during May I treated as above, and all are doing well. The later swarms were given ordinary hives with three standard frames, and are likewise in "fettle," good enough to stand the winter. I have now about twenty lots on five and six frames each as the result of the experiment, and am doing the same again.—AMATEUR, Bristol, September 16.

STORE COMBS AND MOTHS.

[6031.] I note an inquiry *re* above in B.B.J. of August 17 (3859 page 327). Perhaps I may be allowed to say that my own plan is to simply store my racks of empty combs one above another. In the bottom rack I place a large quantity of naphthaline (camphor would probably do as well), and sprinkle lumps here and there right through the pile. On the top rack an old newspaper is placed to keep in the fumes and keep out the dust. Last season, after adopting this plan, there was no trace of the moth in my store-combs. Prior to that I had many destroyed.—W. J. F., Redruth.

IN PRAISE OF THE BEE.

[6032.] The bee is the only living creature which does no harm to animals or vegetables. It gets its food from flowers, but does them no harm, but much good; but for the bee very many flowers would cease to exist, and by its industry, without harming any life, it stores far more honey than it needs for the winter, which honey is a sweet food for every living thing. There is no other creature which absolutely does no harm, and yet does so much good in the world as that busy little labourer, the honey bee.

I am completing my first year of bee-keeping, and am impelled to write as above out of gratitude to the wonderful and serviceable bee.—C. B. J., Loughborough.

Queries and Replies.

[3897.] *Queen Killed in September.*—I am fairly young at the craft (though not quite a "beginner only," as the term is usually understood), but this season I have tried a "Wells" hive, stocking it first with a strong colony, which swarmed in July. The swarm I placed in second compartment of the "Wells," and both stocks have evidently done well until recently, when I found the first stock deserting their half of the hive and crowding into the portion where I had placed the swarm. Finding to-day the bees had practically quite deserted the first half, I decided to place the lot in a "W.B.C.," so as to winter them better. On completing my work, I found the enclosed queen on the ground, apparently just dying, and so I ask:—Is she the original queen, or the young one they have reared this season? Is it the one they have by all appearances deserted, or have I accidentally injured her while manipulating? If so, I shall, of course, have to introduce a new queen at once. It will be difficult to decide if they are without a queen as the hive is so very much crowded with bees, and there is plenty of brood and eggs. I may say I am not by any means struck with the working of a "Wells" hive, and had decided to discard it and use only the "W.B.C." Thanking you in anticipation.—S. F., Bramhall, September 14.

REPLY.—The queen sent is an adult hybrid, and may be the original or a young one reared this year. The wings are torn and jagged as if she had been balled by her own bees during the transferring operations. We can see no trace of her being injured by yourself. In any case, you should introduce a good young queen at once to so strong a stock in order to start well next year.

[3898.] *Bees Deserting Hive Through Wax Moth.*—A most surprising thing happened to one of my stocks at Morton-under-Hill. About 2.15 a swarm issued from one of my hives, and was duly hived in a box. I then proceeded to examine the stock from which the swarm came, and was astounded to find only about half a dozen bees in the hive. There was about 7 lb. of sealed stores in the combs, and brood here and there hatching out; there were also about two hundred cells containing undeveloped brood, but the combs were literally alive with larvæ of the wax-moth. I have tried to get rid of them two or three times this year, but there must have been hundreds of eggs laid in the cells by the moths. So I united bees to another lot and burnt the comb, as I could not get at the grubs to kill them without pulling the comb all to pieces. Do you think that is the reason they deserted the hive? I may say there was a queen with them, for I saw her when I united them to the other lot.—M. U. H., Birmingham.

REPLY.—It is most likely that you are right in supposing that the bees left the hive owing to the moths getting the upper hand. You do not give date when the "swarm" issued; but we judge that it was not a "swarm" in the proper sense of the term, but a case of bees deserting the hive for the reason given above.

[3899.] *Unmated Queens.*—I shall feel obliged if you will kindly give your opinion of the queen sent herewith. She was raised in the natural course of swarming early in July last, and when removing the super on August 26, which was over

excluder, I found a patch of brood on one comb in the super of an irregular kind, similar to that which would be raised from a fertile worker, eggs being laid in an erratic manner about the cells. There was a total absence of brood in the lower chamber, and a rather large quantity of drones, while the stock, which in July was fairly strong, had dwindled to a very small one, the queen having apparently laid no eggs. After removing the super I did a little slow-feeding, and a good number of the drones disappeared, but more irregular brood, similar to what was in the super, is being raised. Last night I united them with a driven stock of bees, including young queen, and this morning found some of the remaining drones thrown out.—W. M., Coalbrookdale, Salop.

REPLY.—The queen has all the appearance of a virgin, and it is about certain she is unmated.

[3900.] *Extracting Heather Honey.*—My bees have been on the moors for the last six weeks, and one lot has a box of seven shallow-frames filled with unsealed honey. It has been in that state for a fortnight, and, as I shall have to fetch them all home in a few days, I should be pleased if you will tell me (1) the best method of getting the honey out of the combs without a "honey press"? I have an extractor, but I suppose that will not do for the heather honey. (2) Also, will any unsealed honey be ready for putting into jars when extracted? How do you account for honey being in the shallow-frames so long without being sealed. A reply in B.B.J. will oblige—NOVICE, Yorks.

REPLY.—1. The only methods of removing heather honey from combs are, using a properly made honey press, and by slicing the combs up, and then putting them in a bag (made of cheesecloth or strong coarse muslin), and using pressure from outside so as to force the honey through the bag. This is generally done by hanging the bag in front of a fire tying the combs in the form of a ball; and as the bulk becomes smaller, moving the string lower down. 2. Unsealed honey is usually thin or unripe, and should be warmed up for some hours before jarring off, otherwise fermentation will probably follow before long.

[3901.] *Uniting Bees in Autumn.*—Is it too late in the season to safely unite two stocks of bees? I have just discovered that one of my colonies is queenless and without any brood. Would it answer to unite these with the stock I had intended wintering on eight frames? The bees in the queenless hive cover roughly six frames. — B. TERRY, Billericay, Essex, September 16.

REPLY.—Autumn is the best season for uniting bees, and the queenless lot will no doubt assist the other colony in wintering well.

[3902.] *Bee Forage.*—I am living on the borders of two large commons of several hundred acres each of heather, similar to sprig of bloom sent. There is likewise a good deal of the other flower enclosed. Can you say if that is any good, as I notice many bees upon it on fine days?—W. T., Bushey Heath.

REPLY.—The heath sent is the true ling (*Calluna vulgaris*), which—as is well known—is the best of all heathers for honey. The "other flower" is *Scabiosa succisa* ("Devil's Bit"), and yields fairly well of both honey and pollen.

[3903.] *Stores for Winter.*—I enclose a grub taken from a worker bee while endeavouring to carry it from its hive. The stock is a very strong one (ten frames in all), and at least two and a half frames are filled with honey, I have also noted that the bees have thrown out drones. 1. As I am not experienced enough to know what the grub is, will you please tell me? 2. As heather is very plentiful here, I suppose I should be safe to pack my hives for winter at the end of this month? I have not yet seen any reply to my query regarding brace-combs in the B.B.J., but I believe the Rymer board cures that. Your reply will oblige,—MAC, Stranraer, September 9.

REPLY.—1. The "grub" cast out is that of a worker bee in the chrysalid stage. 2. You should not pack down for winter without making sure—by examining the combs—that there is sufficient stores to last till March next. The heather in some places has not yielded well this year, so it cannot be relied upon without inspecting the combs.

DUEL BETWEEN QUEEN-BEES.

After the old queen-bee in May or later leaves the hive, taking with her the swarm or cast, the tragedy of the princesses, rivals for the throne of the golden combs, is enacted.

The princess first hatched out and most capable of action will visit her sister princesses and destroy them one by one in their cells. If two princesses hatch out at the same time and are about equal in strength and fitness to reign, there may be a long duel. In these days we are all to make humble obeisance before the great image of Natural Selection. Darwin was sure that the "hatred" which the worker bees show towards their brother drones at the autumn massacre and the hatred of princess bee towards princess bee have come through Natural Selection; it is a

rule that selects for survival the strongest or fittest, and is ever destroying the weaker—a kind of "To him that hath shall be given, and from him that hath not shall be taken away even that which he hath."

But is hatred, in the sense we employ it of human feeling, the right word? True, the shrill cry of the queens or princesses preparing for the contest has sounded to human ears one of menace and wrath—a war cry. But a friend whose bee-garden among Kent raspberry fields I want to be visiting at the height of the honey-flow gave me an account of a deeply interesting duel he arranged and witnessed between two rival queens, taken from the hive and shut up together in a box with a glass top. Does it ever happen that two queens or princesses, finely matched, both sting one another and both die? If so, there would be a danger of the whole hive or swarm dying out—for there might be no worker grubs in the cells of the right age to enqueen by diet of royal jelly. But my friend, a bee-master of long experience, believes that the duel is never to the death of both. He curiously watched the contest between these two queens. It was long, and his impression was that they were trying to find out, by some means obscure to human understanding, which was the right one to give the fatal sting.

The duel, in fact, consisted of one protracted preliminary or trial stage, and then one swift and sure death-stroke. There appeared to him to be nothing like a fierce onslaught by both sides; rather a spirit of cautious investigation or inquiry. Suppose this is the spirit in which the queens engage; what a perfection of science the bees have reached, and how inefficient, compared with it, much of the crude machinery of human intellect seems!—GEO. A. B. DEWAR, in the *Standard*.

Bee Shows to Come.

September 16 to 23, at the Agricultural Hall, London.—Honey Show in connection with the Twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Nearly £50 in prizes for honey and beeswax, including four prizes of £4, £3, £2, and £1, in honey trophy class. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad Street, London, E.C.

September 27, at Altrincham.—Annual Show of the Altrincham Agricultural Society. Good Money Prizes for Honey, along with Silver and Bronze Medals of the Cheshire B.K.A., and others. Open Class for Frame-Hive (unpainted). Schedules from J. Herbert Hall, 2, Dunham Road, Altrincham. **Entries closed.**

October 3 to 6, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances, Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries close November 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Mr. E. Whitfield, Medstead, Alresford, Hants, writes as follows:—"In reply to "A Lover of Nature" in your issue of September 7 (page 360), I can say that Ropley, Hants, is not a good fruit district, and only a fair district for bee-forage. I am living within two miles of it. Should 'A Lover of Nature' care for any particulars, I shall be glad to send them. I enclose you my address."

J. E. P. (Swansea).—Sugar for Bee-food.—If your grocer can guarantee the sugar to be pure cane, it will do very well for making into syrup-food for bees. It is a refined sugar in the largest crystals we ever saw.

M. L. R. (Ayrshire).—Italian Queen-Breeders.—Messrs. Malan Brothers, Luserna, San Giovanni, Italy, are as reliable as anyone we know among foreign queen-breeders, and may be safely trusted to supply what they undertake.

Honey Sample.

(Mrs.) M. W. (N. Wales).—Honey is from mixed sources, but the prevailing flavour is from bell-heather (*Erica cinerea*).

Suspected Combs.

R. S. W. (Kent).—1. Comb is affected with F.B. of old standing. 2. Honey from infected hives is perfectly innocuous to human beings, and may be used as food without the slightest risk.

ENQUIRER (Pontardulais).—A partial inspection of comb sent shows no disease, but sample was unfit for examination, being covered with green mould, and must have been in box for some time before posting.

B. C. O. (Birmingham).—Both samples are affected with foul brood. In No. 1 the disease seems to be a recent outbreak, and No. 2 is not of old standing, so they may be regarded as only of this season's duration.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, the 20th inst., Mr. T. I. Weston occupying the chair. There were also present Messrs. T. Bevan, W. Broughton Carr, R. T. Andrews, F. J. Cribb, J. B. Lamb, W. F. Reid, Ernest Walker, and the Secretary. Letters regretting inability to attend were received from Miss Gayton, Dr. Elliot, and Mr. R. Godson. The minutes of the previous meeting were read and confirmed.

The following new members were elected—viz.:—Rev. F. E. S. Jacomb-Hood, Ashfield, Ross; Mr. Robt. Johnson, 109, Wellmeadow Road, Catford, Kent; Rev. T. Slevan, 27, Chestnut Avenue, Headingley, Leeds. The Finance Committee's report, giving particulars of receipts and expenditure to date, was presented and formally approved.

Reports upon examinations in Devonshire, Essex, Kent, Lancashire, Middlesex, Norfolk, Nottinghamshire, Surrey, Warwickshire, Worcestershire, and Wiltshire were received. As a result it was decided to grant certificates to the following candidates:—Misses Mabel Allday, Rose Barton, Gertrude Bath, Annie Dean, Eva French, Dorothy Greaves, Kate M. Hall, Georgina Hallows, Rae McGibbon, Edith Rix, Louise Schlaepfer, Florence Simms, Lily Sopper, and Eva Willoughby; also to Messrs. Arthur D. Allen, J. R. Aubry, J. S. Bailey, Fredk. G. Brown, Henry Burden, G. Butler, Herbert Dandy, S. Darlington, Henry Falkner, G. S. Faunch, J. R. Freeman, John Freestone, G. F. Gibbons, Mark Greaves, Jas. Grimwood, Bertram Hutchings, E. G. Ive, C. Jones Johnson, Percy Kemp, Edwd. Mann, J. B. Peart, Robt. Rymer, E. H. Stanbrook, E. W. Shakespeare, Reginald Tangye, A. C. Tew, F. B. Tonkin, L. A. Vidler, G. T. Walden, and Wm. Jas. Welch.

Arrangements were made for an examination at Luton, also for the Second Class Examination to be held on November 17 and 18 next. It was decided to hold a conference of representatives of affiliated Associations followed by a conversazione on Thursday, October 5, when the Committee on Foul-brood Legislation will present their report. Amongst other subjects to be discussed will be "Village Bee Clubs," "Unequal Sizes of Sections," and "The Standard Frame."

Conference at 4 p.m. Conversazione at 5.

The next meeting of the Council will be held on Wednesday, October 18.

SURREY BEE-KEEPERS' ASSOCIATION

ANNUAL SHOW AT THE CRYSTAL PALACE.

The tenth annual show of the above association was held in the Concert Room at the Crystal Palace on September 14, 15, and 16, and was a complete success in every way. The exhibition of honey, hives, and bee-products was admirably staged, and larger in extent than in any previous year, the entries numbering nearly 300, while for quality the exhibits were very good indeed.

A most creditable feature of the display was, to our mind, the hearty response made by members of the Surrey B.K.A.—which now has a membership of something like 620—in supporting the show by appearing as exhibitors on the show-bench. Of the twenty classes for honey and bee-products fifteen are confined to members only, and as the entries in these classes constitute a large majority of the total number, this should serve as an incentive to other county associations to do likewise, for we may safely say that in no part of the kingdom is there a county B.K.A. that so loyally supports its indefatigable hon. sec. as does that under Mr. F. B. White's guidance. The result of it all is a fine show, worthy of the all-round efforts made to ensure success.

The judges were Dr. Elliott (London) and Mr. F. Brett (Brighton), who made the following awards:—

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st (silver medal), F. Bowers, Coulsdon; 2nd (bronze medal), A. Greenslade, Sutton; 3rd (certificate), E. Bontoft, Caterham Valley; v.h.c., Miss A. M. Schloesser, Great Bookham; h.c., A. E. C. Mumford, Redhill.

Six 1-lb. Sections.—1st (bronze medal), Stanley Nye, Sutton; 2nd (certificate), Walden Bros., Pirbright; 3rd, James Grimwood, Earlswood; v.h.c., A. E. C. Mumford; h.c., F. J. Weise, Anerley.

Six 1-lb. Heather Sections.—1st (bronze medal), W. A. Wood, Normandy; 2nd, A. Seth-Smith, Cobham; 3rd, W. P. Gornall, Mytchett; v.h.c., W. Sole, New Malden.

Three Shallow-Frames of Comb Honey.—1st (silver medal), A. Seth-Smith; 2nd (bronze medal), James Grimwood; 3rd (certificate), W. Ringer, Tatsfield; v.h.c., G. H. Wynn, Haslemere.

One Shallow-Frame of Comb Honey.—1st (bronze medal), A. Seth-Smith; 2nd (certificate), F. B. White, Redhill; 3rd, J. Kachler, Croydon; v.h.c., J. Grimwood; h.c., R. Luff, New Malden.

One Standard-Frame of Comb Honey.—1st (bronze medal), G. H. Wynn; 2nd (certificate), W. Ringer; 3rd, W. A. Wood.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st (silver medal), T. H. E. Watts-Silvester, Surbiton; 2nd (bronze medal),

P. W. Worsfold, Shalford; 3rd (certificate), H. Dann, Wallington; v.h.c., S. R. Whitley (Lingfield) and Miss Schloesser; h.c., E. T. Grove (Ewell) and A. Greenslade.

Six 1-lb. Jars (Light) Extracted Honey.—1st, Miss Wickham-Jones, South Norwood; 2nd, F. J. Bernau, Reigate; 3rd, G. B. Bissett, Wallington; v.h.c., H. Dann, T. H. E. Watts-Silvester, J. Davis (Oxshott), and P. W. Worsfold; h.c., E. T. Grove, J. Kachler, and C. Monk.

Six 1-lb. Jars Extracted Heather Honey.—1st, C. B. Gabriel, Horsell; 2nd, A. Seth-Smith; 3rd, G. H. Wynn; v.h.c., F. Alpin, Haslemere; h.c., W. A. Woods.

Six 1-lb. Jars (Dark) Extracted Honey.—1st (bronze medal), E. T. Grove; 2nd (certificate), G. B. Bissett; 3rd, W. G. Fisher-Webb; v.h.c., F. B. White and T. H. E. Watts-Silvester; h.c., W. W. Drewitt (Dorking), W. Ringer, A. Greenslade, and J. Davis.

Six 1-lb. Jars Granulated Honey.—1st, M. J. Lamboll, Chiddingfold; 2nd, P. W. Worsfold; 3rd, A. Seth-Smith.

Display of Honey and Bee Products.—1st (silver medal), F. B. White; 2nd (bronze medal), W. Ringer; 3rd (certificate), A. E. C. Mumford.

Beeswax.—1st (certificate), F. J. Bernau; 2nd, J. Davies; 3rd, W. Ringer; v.h.c., R. J. Browning, Albury; h.c., E. Bentoft.

Articles of Food Containing Honey.—1st (certificate), A. E. C. Mumford; 2nd, R. Luff; 3rd, Miss W. Jones; v.h.c., T. H. E. Watts-Silvester; h.c., J. Grimwood.

NON-PREVIOUS WINNERS ONLY.

Six 1-lb Jars Extracted Honey.—1st (certificate), Miss Wickham-Jones; 2nd, C. H. Ross, Wimbledon; 3rd, R. Luff; v.h.c., F. J. Bernau and C. B. Gabriel; h.c., W. G. Fisher-Webb.

OPEN CLASSES.

Six 1-lb. Sections.—1st (silver medal), James Lee and Son, Andover; 2nd, Miss E. Wilks, South Milford, Yorks; 3rd, H. Willey, Gilmorton, Lutterworth; v.h.c., H. E. Rampton (Alresford, Hants) and J. Garratt (Meopham, Kent); h.c., Mrs. M. Cokayne (Roehampton) and W. Ringer.

Six 1-lb. Jars (Light) Extracted Honey.—1st (bronze medal), J. Berry, Llanrwst, N. Wales; 2nd, T. S. Holdsworth, Kirton Lindsay, Lincs; 3rd, C. Lodge, High Easter, Chelmsford; v.h.c., H. E. Rampton (Alresford, Hants), W. J. Cook (Market Rasen), C. H. Bocock (Newmarket), J. Lee and Son, and F. J. Hillier (Andover, Hants); h.c., J. W. Drake (Lutterworth, Leics), A. Ward (Market Harborough), W. Sole, and T. Phillips (Exeter).

Three Shallow-Frames of Comb Honey.—1st (bronze medal), E. C. R. White, Salisbury; 2nd, J. Lee and Son; 3rd, T. H. E. Watts-Silvester.

One Shallow-Frame of Comb Honey.—1st (certificate), E. C. R. White; 2nd, J. Lee and Son; 3rd, J. Kachler; v.h.c., J. Garratt; h.c., A. Brightwell (Hants).

Beeswax.—1st, F. Harris, Sibsey, Boston, Lincs; 2nd, E. C. R. White; 3rd, G. Butler, Crawley; v.h.c., T. E. Hartshorne (Salop) and C. Lodge; h.c., J. Garratt and G. Leeding (Sherborne, Dorset).

Interesting or Instructive Exhibit Connected with Bee Culture.—1st (certificate), F. B. White; 2nd, E. H. Taylor, Welwyn, Herts; v.h.c., T. Evershed, Billingshurst; h.c., Miss J. Evershed, Billingshurst.

Observatory Hive with Bees and Queen.—1st, A. E. C. Mumford; 2nd, J. Kachler; 3rd, J. S. Greenhill, Wimbledon; v.h.c., E. H. Taylor.

Collection of Hives and Appliances.—1st (silver medal), C. T. Overton and Son, Crawley; 2, Mrs. Seadon, Bromley; 3rd, J. Lee and Son; v.h.c., E. H. Taylor; h.c., C. Greenhill.

Complete Frame-Hive for General Use.—1st (bronze medal), E. H. Taylor; 2nd, C. Greenhill; 3rd, C. T. Overton and Son; v.h.c., E. A. C. Mumford.

Outfit for a Beginner in Bee-keeping.—1st (certificate), E. H. Taylor; 2nd, Mrs. Seadon; 3rd, C. T. Overton and Son; v.h.c., C. Greenhill.

CAMBS AND ISLE OF ELY B.K.A.

HONEY SHOWS AT CAMBRIDGE.

The above Association held a most successful honey show at Cambridge on Thursday, July 27, in conjunction with the annual show of the Cambs and Isle of Ely Agricultural Society. A large tent was utilised for the display of honey, the entries numbering 82, most of the exhibits being of a very high standard. Mr. R. Brown, Somersham, acted as judge, and his awards were as follows:—

Twelve 1-lb. Sections.—1st, G. Hills, Comberton; 2nd A. Barker, Comberton; 3rd, C. H. Bocock, Newmarket; v.h.c., H. Seamark, Willingham; h.c., C. J. Massey, Cherryhinton.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st, J. Barnes, Burwell; 2nd, G. Hills; 3rd, F. R. Ford, Burwell; v.h.c., A. Barber; h.c., W. Canham, Soham.

Twelve 1-lb. Jars (Medium) Extracted Honey.—1st, C. R. Piggott, Landbeach; 2nd, H. Frohock, Willingham; 3rd, R. Woods, Elm.

Two Shallow-frames Comb Honey.—1st, C. Dunn-Gardner, Fordham Abbey; 2nd, A. Barker; 3rd, R. Wood; v.h.c., F. R. Ford; h.c., J. Barnes.

Honey Trophy.—1st, G. Hills; 2nd, C. J. Massey.

The second exhibition was held on

August 7 in connection with the Mammoth Show, which was held this year on Midsummer Common, Cambridge, and attracted an attendance of nearly 40,000 visitors. The bee and honey section completely filled a tent nearly double the size of that used last year, and formed one of the most attractive features of the show. During the afternoon Mr. C. J. Mapey gave demonstrations in the bee-tent, assisted by Mr. R. Brown, who during the afternoon examined three candidates for third-class certificates. The quality of the exhibits were exceedingly good, and the competition keen in consequence. The awards were as follows:—

MEMBERS' CLASSES.

Honey Trophy.—1st, J. Barnes; 2nd, C. J. Mapey; 3rd, G. Hills.

Twelve 1-lb. Sections.—1st, G. Hills; 2nd, A. Barber; 3rd, J. Short, Chesterton; v.h.c., W. Wilson, Trumpington; h.c., A. Purbank, Chesterton.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st, J. Barnes; 2nd, F. R. Ford; 3rd, C. H. Bocock, Ashley; v.h.c., C. J. Mapey; h.c., W. R. Billing, Elsworth.

Twelve 1-lb. Jars (Medium) Extracted Honey.—1st, C. R. Piggott; 2nd, G. Hills; 3rd, R. Woods.

Twelve 1-lb. Jars Granulated Honey.—1st, H. T. Frohock; 2nd, R. Woods.

Honey in Bell Glass.—1st, C. J. Mapey; 2nd, J. Barnes; 3rd, J. E. Pilgrim, Cambridge.

OPEN CLASSES.

Single 1-lb. Section.—1st, A. Barber; 2nd, J. Barnes; 3rd, H. W. Saunders, Shelford; v.h.c., G. Hills; h.c., C. J. Mapey.

Single 1-lb. Jar Extracted Honey.—1st, F. R. Ford; 2nd, W. Mace, Newmarket; 3rd, J. Barnes; v.h.c., G. Hills; h.c., T. G. Hillier, Andover.

COUNTY OF ANGLESEY B.K.A.

The first annual honey show in connection with the above lately formed association was held in conjunction with the County Agricultural Society's Show at Llangefin on August 10, and was a decided success, the entries in some classes being very good, though the cottagers' classes did not fill well. Mr. Jno. Berry, of Llanwrst, was the judge, and spoke highly of the quality of the winning exhibits. His awards were as follows:—

MEMBERS' CLASSES.

Three 1-lb. Jars (Light) Extracted Honey.—1st, Rev. Okyffin Williams; 2nd, Mrs. Hughes; v.h.c., E. R. and M. J. Owen; c., Mrs. A. G. Williams.

Three 1-lb. Jars (Medium or Dark) Extracted Honey.—1st, O. Roberts; 2nd, S. Williams; v.h.c., Mrs. A. G. Williams.

Three 1-lb. Sections.—1st, W. Roberts; 2nd, Mrs. Mathews.

Beeswax.—1st, E. R. and M. J. Owen; 2nd, Mrs. A. G. Williams.

COTTAGERS' AND LABOURERS' CLASSES.

Three 1-lb. Jars (Light) Extracted Honey—1st, T. Pritchard; 2nd, H. Jones.

Special Prize given by a Member of the A.B.K.A. for the Best Trophy of Honey and Bee Products.—1st, E. R. and M. J. Owen; 2nd, S. Williams.

Two demonstrations were given in the bee-tent during the day by Mr. Berry, and were much appreciated by large gatherings of interested spectators.—(*Communicated.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Corent Garden, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office, 8, Henrietta street Corent Garden, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

THE SEASON IN HEREFORDSHIRE.

[6033.] I am doubtful as to whether I ought to take up space in your valuable paper by any recital of my experiences this season, but as we have been told not to expect increase of stocks and surplus simultaneously, I venture to send you a few jottings. Let me thankfully acknowledge having had a good season in all respects. With seven hives in the spring, I have had four prime swarms and two casts, the latter being returned after removal of queen-cells. One of the swarms I gave away; the others were hived on the old stands, and had the supers given to them which were on the parent stocks at the time of swarming. My total surplus is 676 lb. from supers only, or an average of 96½ lb. spring count, or 67½ lb. autumn count. Thus I have, at any rate, secured both surplus and increase. My first swarm came out, on June 15, from a hive (supered on May 18) that had drawn-out foundation in two supers, and stored a fair amount of honey. These supers the swarm completed, and filled two additional ones, yielding altogether 121 lb., while the parent stock also yielded 21 lb. after the swarm left it, making 142 lb. from stock and swarm. The second, in like manner, yielded 80½ lb. from swarm, and 33¼ lb.

from parent stock — total 113¾ lb. The third swarm gathered 108¾ lb. The parent stock in this case had no super given afterwards. They have, however, filled their brood-nest to repletion. The three hives from which no swarm issued have yielded 63½ lb., 67½ lb., and 112 lb. respectively. Thus, a comparison of the hives which swarmed with those which did not, is all in favour of the former, which yielded in the aggregate 364½ lb., while the latter yielded only 243 lb., or about two-thirds. The parent hive of the swarm which I gave away yielded 68½ lb. In this case the hive remained in its original position, and was not, in consequence, denuded of its flying bees.

I have found it necessary in six cases to give from 16 to 20 lb. of syrup, very little honey having been stored in the brood-nest. May I give a word of warning here to "beginners"? Make sure about the food in your hives. Take nothing for granted. Do not think that a stock *must* be well supplied in brood-nest because it is strong and has done well in supers. The latter fact *ought* to make you suspicious that *all* honey has been carried into supers, and that a liberal supply of food must be given if you are to avoid a catastrophe during the winter. Moreover, do not delay your feeding until the weather is cold. It should all be finished by the end of September at the latest, and earlier than that if possible. *Nota bene!*—W. H., Brilley, Herefordshire.

SWALLOWS AND BEES.

[6034.] In the B.B.J. of August 10 (page 316) Mr. W. H. Harris asks if any bee-keeper can inform him "if house-martins or swallows prey upon bees." Being busy at the time, and also with the object of giving the birds a chance to get away before I gave information against them, I have delayed this reply. I now write to say that my experience is that swallows do prey upon bees. For the last three seasons a pair of these birds have brought up two families of four birds each time, and fed them a great deal on drones. These birds build their nests in the "oven-house," set apart for the use of three cottages, of which I own one, the water-tap being in the same house, and people so often going in and out the birds become quite tame, so that when they perched on the clothes-line you could almost touch the birds without their taking flight. My wife, going for water one day, saw a drone on the floor among the refuse cast out from the birds' nest, which caused us to watch the swallows. As I stood in the yard I saw one of them give chase to and catch a drone-bee, which it carried up to the youngsters in a twinkling, and before that bird came out the other parent sat on the line with a drone in its mouth. I then took up a position where I could see my hives, and distinctly saw the birds swoop down to within a foot of the hive-entrance, catch a bee, and off again to the nest. The above occurrences took place last year, and my neighbours both being bee-keepers, we decided to keep the swallows out of the house referred to this year; but the door was not always kept shut, so the birds took up their old quarters again. I may say in conclusion that I had three queenless stocks in the autumn of last year, which loss I put down to the account of Mr. and Mrs. Swallow. One lot was "robbed out," the other two I united and requeened. I shall be having a photo taken of my apiary later on, if you should care to have one for "Homes of the Honey Bee."—Geo. M. Coles.

[Shall be pleased to have a photo when ready. We may also mention that, the busy season being now over, the publication of our bee-garden pictures will be resumed in next issue and continued weekly.—Eds.]

[6035.] I remember some years ago, when my father had an apiary in Cornwall of forty or fifty stocks of bees, there were some swallows' nests in a large store close by, and we often noticed that the old birds caught a great number of drone-bees and carried them off to feed the young swallows, but they, being sometimes too large for the tiny birds' throats, the drones were dropped on the floor dead.—J. Short, Streatham.

BEES IN SOUTH AFRICA.

[6036.] The Dutch people of this Colony have a theory that bees strongly object to the smell of oranges and carrots—in fact, they tell me that it is favourite prank of schoolboys to drop some orange peel or carrot leaves at the month of a hive when one of their enemies, preferably their schoolmaster, is likely to come along that way.

I have never heard of this before, and should be glad to know if it is a recognised fact, as it is well to safeguard against these things.

A carpenter also tells me that he was once erecting a verandah near a hive of bees, and they took no notice of him until he commenced painting it, when the whole stock made a rush at him and he was badly stung.

It is possible that the warm climate of South Africa helps to cause these vicious bouts; but I have found the bees of the country just as easy to manipulate as any in England.—Q. Y., Natal, South Africa, August 31.

MOOT POINTS IN BEE-KEEPING.

[6037.] *House-martins and Bees.*—Anyone who can refer to file of old BEE JOURNALS will find that about the year 1880 I sent an account of martins (? swallows) eating bees. This is the only instance I ever noticed of their doing so, and then they were doing it strongly.

Earwigs Emptying Supers.—Earwigs may be, and no doubt are, fond of honey; but it is a tall order asking me to believe that, however numerous, they would empty a crate of full sections in three or four days. The most likely idea to me is that the sections were emptied by robber-bees, and that the earwigs were only subsequent visitors. If the latter could gain access to the sections no doubt the former could, and we, most of us, know that an hour or two is quite sufficient time for robbers to clear any super. Not a bee being in the super does not count for much, as not a bee would want to be there when the honey was gone.

Heavy Swarms.—Our friend "D.M.M." asks for information as to results from large swarms. I never had a 20-pounder, but I once had one of 13 lb. (from one hive), and it certainly was not such a success as I hoped for. Others of less weight did as well and better.—NONDESCRIPT, Newcastle-on-Tyne.

BEE-KEEPERS' ASSOCIATION FOR S. AFRICA.

[6038.] A number of gentlemen here interested in bee-culture being desirous of forming a Bee-keepers' Association, we shall esteem it a favour if you can put us in the way of procuring a copy of the rules of any of your Associations in England.

If you can furnish us with a copy the cost will be remitted by return mail.—CAIRNCROSS AND ZILLEN, Church Street, Pretoria, S. Africa, September 1.

[We have pleasure in forwarding by early mail copies of the rules of the British Bee-keepers' Association, and also of several of the largest county Associations in this country.—EDS.]

GLASS HONEY-JARS CRACKING.

[6039.] Could any of your readers give me any information as to glass honey-jars being so liable to crack? I managed to be supplied with a bad lot this year. Quite a number of them cracked round the bottom, mostly after washing, while standing on drying-rack; some even did the same after being filled with honey, causing a lot of trouble and great mess. On examination several appeared to be badly moulded, being thin on one side, but others were all right in this respect. Nor was the water too hot or mode of washing to blame, as I washed several myself very carefully to test this. I may say that I paid 21s. for a gross, out of which over two dozen cracked in the manner described. My worst fear is that some may have gone while in my customers' hands, making them give up buying honey, as being too messy. I should be glad if any reader who is connected with the glass trade could give me some advice, so that I may not be landed in the same predicament in future —GLASS, Cheshire, September 2.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Wiring Frames.—At the Chicago Convention Mr. Dadant made the following important remarks regarding the wiring of frames:—"Many put their wires too low. The weight is at the top, the pull is on the top storey, and so the first wire should be put very close to the top, within an inch. When you come to the bottom of the frame, those who have handled foundation for years know that those cells are hardly ever stretched, and so there is no need of wiring below the middle of the frame. If you put one wire at the middle and the other two above, you will have better success than if you put the wires lower. It is best that wires should be *taut*, but in a great many cases it is not necessary if the wiring is carefully done." The directions given at home to beginners is to pull until the wire will "twang." It is a mistake to pull too hard. I should like the lowest wire rather below the centre, as it secures that the sheet hangs truer, and prevents sagging or buckling in the lower fourth of the frame, for at times the sheet warps if drawn out irregularly.

Smoker Fuel.—In cleaning a bee-smoker *Gleanings* directs:—"Pour in a little kerosene and set fire to it, leaving the smoker open. The deposit can then be easily scraped off while hot and soft, or peeled off when cold." Mr. Root has lately been recommending greasy waste, oily rags, and the like for smoker fuel. Such stuff is easily obtained at any machine shop or engine rooms, or near railway stations; or, as a substitute, procure some old "gunny sacks" where grain is bought and phosphates sold. The reports all agree that the waste or rags do not creosote the smoker, that the smoke is clean and lasting, and very effective, and that it is readily ignited. The A.B.J. recommends sawdust:—"First

push in some shavings, then fill up with sawdust, packing firm, after bore a funnel-shaped hole in centre into which drop about a teaspoonful of kerosene. Place some green grass over the top to act as a spark arrester, and you can go ahead for three or four hours without replenishing."

Bottom Starters.—Dr. Miller is quite in love with bottom-starters in his sections. Let us see what he claims as benefits to be derived by their use, weighed against the obvious time and labour the operation of fixing them in entails:—"They look better with two lock corners down. The comb is built well to the bottom. Sealing up and down is more complete. They stand better top-up, and of course travel better. They build truer to the perpendicular, no swinging over to one side. They get rid of bulging sections." Does not the use of full sheets secure all this without the labour of double fixing?

Wax Rendering.—Mr. Root's "boys" made an extensive and exhaustive test of melting up combs by the bag and boiler plan, contrasted with the wax press. The results deserve being widely circulated:—"In some cases the amount of wax taken from the bag punched under water was only 33 per cent. of the whole amount obtainable, and other times 50 per cent. I am satisfied from the experiments, which were repeated again and again, that the old bag plan of melting beeswax used to waste somewhere about 50 per cent. of the amount of wax in the combs." When, as he obligingly informs us, an efficient press can be made out of any half-barrel, with a 4 by 4 oak studding for a lever, this system should supersede the old one.

Another good plan for extracting wax under pressure from old combs is described and illustrated in A.B.J., though taken from *L'Apiculteur*. It consists of a receptacle of galvanised iron or tin, but in this body is fitted a screened hoop, the centre of which is perforated, and through which a shaft is placed, the latter at its lower part being supplied with a winged wheel similar to those on windmills. The upper end of the shaft carries a crank which is removable. "When heat is applied the wax melts and seeks to rise, but at the same time the pellicles, cocoons, and cast skins of the brood-combs ascend also, and close the holes of the screen. Then comes the work of the winged wheel by the use of the crank. At the time when the water begins to boil, we turn this crank every half-minute, at the rate of 40 to 60 revolutions a minute. The fan-shaped wings stir the mass of cocoons, beat it, break it to pieces, and, thanks to the windmill shape of the wings, push to the bottom all the obstructing residue, thus permitting the lighter beeswax to come up through the screen and rise to the surface."

At the Antipodes.—The Australian *Bee-keeper* (aged six years) and the *Bee Bulletin* (aged thirteen years) are mainly devoted to a lengthy account of the annual meeting and conference of the Victorian Apiarists' Association, but the agenda embraces few points of more than local interest. "Advance, Australia!" seems to be their motto, and I cull the following to show that they have aspirations. Co-operation seems to be the panacea advocated for curing all ills:—"For the bee-keeping industry to be put on a sound and profitable basis the bee-keepers of the State should have central receiving stores in the cities and large towns for the purpose of receiving, grading, canning, and distributing honey, and also for the purpose of exploiting outside markets to clear the surplus. Then, instead of the tons of nectar in our forests going to waste, they would be occupied by prosperous bee-keepers, adding some thousands of pounds to the revenue of the State."

Wintering Experiments.—The *Canadian Bee Journal* also devotes almost half its space to a report of the meeting of the Ontario Bee-keepers' Association. The wintering problem claims the chief part of the discussion. The amount of food consumed during the winter months interests me most. It is for the cold climate of Canada wonderfully small. One group averaged 53½ lb. when winter packed, and in spring showed a decrease of 16¼ lb.; a second set had only 13¼ lb. of stores consumed. These hives were wintered outside, but "insulated" during the period of extreme cold. Inside, cellar wintering, the consumption of stores was even less. The first group of six had lost only 9½ lb. on an average, the second group, with more ventilation, only 8¼ lb., while the third group, wintered as they were in summer stands, had consumed 9½ lb., and the fourth group, ventilated above, 8¾ lb. The average for the whole twenty-four hives shows the low average of loss per hive of only 9 lb. Hives fed with sugar-syrup, and again with honey, as another experiment, showed an average in favour of the group fed on honey of 1 lb. 13 oz. less stores consumed.

Expert Opinion.—More honey from colony and one swarm, or from colony and no swarm? This question is answered by twenty-nine experts, with some favouring one side and some the other. The preponderating opinion (twenty-one to

eight) is in favour of the combined lot hindered from swarming. Pretty unanimously we here will agree with the verdict. Yet it depends on a number of things or conditions, as, for instance, the length of flow, when the swarm comes off, and how both are handled. Personally, I would vote for the colony without any swarming "every time," conditions and surroundings being such as they are with us.

Queries and Replies.

[3904.] *A Case of Bees Robbing.* — Will you kindly advise me on the following?— I was away from home on September 21, and am told that during the afternoon, which was warm and sunny, my only hive was surrounded by bees, the alighting-board being covered and the air thick with them, those on the wing near the hive were flying with their heads towards the entrance, which I have had reduced in width to about half an inch for the past few days, as wasps were becoming troublesome to the bees when the entrance was open six or eight inches. Inside the hive, the bees cover seven or eight frames, and I had commenced to give medicated syrup from a regulating feeder, as directed in the "Guide Book." Not being present at the time, I am not at all sure if the flying bees were my own, although I presume they were, but, if not, I ask:—1. Do you think it a case of robbing? I ask this because hundreds of dead bees were lying on the ground and on the alighting-board, which reaches down to within three inches of the ground. I have wrapped the frames up warmly, as we have had some very cold nights lately, and my garden is high and exposed. 2. Have I kept the bees too warm, seeing that there is an American cloth and three felts on? Enclosed are a few of the dead bees for inspection. — W. H. N., Eastbourne.

REPLY.—1. Judging by the appearance of dead bees sent, there has been some "robbing," which your bees were evidently able to resist effectually by having only a narrow entrance to defend. 2. There is no need for wrapping up frames warmly so early as this, though it will do no harm if liberal feeding is required, because warmth will help the bees in sealing over the food given.

[3905.] *Dealing with Foul Brood.*—I send you herewith a frame taken from one of my hives on Saturday last, asking your advice on the following matter:—In March last I bought a stock in straw skep, and, as far as I could see, they were in good health, and, being very strong, I decided to allow them to swarm, instead of placing them on a frame-hive to transfer themselves. The swarm issued on May 10, and, after being hived, was fed for a time. I afterwards put on a rack of sections which the bees took to fairly well. However, a week or two back, I noticed fewer bees about, and as the sections were not being filled rapidly, I kept watch on them, and noticed that the bees seemed to lessen in numbers. I therefore removed the sections, of which they had filled about a dozen, and on examining the frames I find two or three like this one I am sending you. If it is foul brood, I propose to put the bees in to a clean hive with foundation only and feed up, destroying the old combs except the top part, which is sealed honey, and I thought the bees might perhaps clear out. Do you think that will be sufficient, and, if so, what had I better do with the original stock in straw skep, which I imagine is in a similar condition? Some bees in both hives are still busy carrying in pollen. I kept bees and have been a subscriber to your JOURNAL for many years but for the last four or five have not had any bees, so that I feel rather upset on the matter, and any assistance will be appreciated. I will take any steps you may advise, but what is to be done must be seen to at once as season is so late.—A DISAPPOINTED BEE-KEEPER, Essex.

REPLY. — The frame of comb sent is affected with foul brood of rather virulent type, and it would be waste of time to try and cure it, especially at this season. While sympathising with you on the unfortunate restart, we feel that your best course will be to burn the lot — bees, combs, and frames. Then if hive is thoroughly disinfected you could buy about 4 lb. of healthy driven bees with young prolific queen and start afresh. This will be far better than tinkering with the diseased bees, and more economical in the end.

[3906.] *Dispensing with Comb-foundation.* — Since I have subscribed to the B.B.J. I have admired very much the replies to various queries put by your readers. There is a perfect ability in the answers given which certainly induces questions from those in difficulties with their bees. We have not in our French papers such a mine of information. Let me consequently beg you to answer the following in an early issue of the interesting BRITISH BEE JOURNAL. I know very well that the matter I make mention of is not practised by advanced bee-keepers in England, but you should be perhaps, or one of your readers who would kindly oblige me, aware of the question.

You know that, before the invention of a machine for making comb-foundation

in sheets, a triangular bar was attached under the top bar for starting rightly the wax-constructions by bees. C. Dadant says in his work, "The Honey Bee," that this process was ordinarily successful. If we would use now, instead of this adventitious triangular bar, a top-bar bevelled to a sharp edge underneath on its underside, without adding any kind of foundation or wax starters at all, do you think that it would be sufficient for guiding bees in building their combs straight in the frames, especially in the widest Langstroth or Dadant-Blatt frames? I should be glad to learn if some English bee-keper had made experiences in this direction. Apologising for my poor English, and thanking you in anticipation, I am yours faithfully—A FRENCH SUBSCRIBER, Paris, September 18.

REPLY.—We have little or no doubt that if hives are set perfectly level, and the bevelled-off "sharp edges" of top-bars are dipped in molten wax, the bees will build straight combs within the rectangle of frames so prepared. At the same time it is generally admitted that even a 1-in. strip of comb-foundation is advantageous to the bees in their first start with comb-building.

[3907.] *Removing Bees from Trees.*—Please give me your opinion on the enclosed comb. I took it from a tree a week ago, and I learn that there had been bees in the tree for ten or twelve years past. We removed four pailfuls of comb altogether, none of it containing much honey. 1. Is there foul brood in the comb? I have run (or rather squeezed) the honey through a straining-cloth and it tastes as if fermenting; it is also very thick. 2. Will it do for bee-food?

I started bee-keeping this year, and have been very successful. From two hives purchased in the spring I have taken seventy sections and have forty more ready for removal filled with heather honey. I have done better than any of my bee-keeping friends in these parts, and am well satisfied with the year's work.—BEGINNER, Liphook, Hants.

REPLY.—There is no disease in comb, the brood being chilled and dead from cold. The honey will do for bee-food, but if fermentation has set up it should be thinned down with hot water to the consistency of good sugar-syrup and put on the fire till it just begins to boil, when any scum on the surface should be removed before the food is allowed to cool. The comb and dead brood as sent formed rather a nasty mess for editorial inspection.

[3908.] *Checking an Outbreak of Disease.*—Will you kindly give me your opinion of the enclosed sample of brood-comb? I may say the hive from which it was taken has been very strong all summer, and I have taken about 120 lb. of honey from it, but about a month ago, when looking through the frames prior to packing for wintering, I noticed a patch or two similar to the enclosed.—W. W., Yorks.

REPLY.—There is incipient foul brood in several cells of comb sent, and it will be advisable to remove all combs so affected before packing the bees down for winter. In addition to this, preventives should be used, and all food given medicated.

[3909.] *Beginners and Cross-built Combs.*—I am just starting bee-keeping, and have purchased a stock of bees in a frame-hive, but on examining them I was greatly disappointed to find that the two rear frames have had no foundation put in them when bees were hived. There are seven frames in the hive, and the bees have built combs across the three frames at back so that I cannot get the fifth frame out without lifting the sixth and seventh, as all three frames are joined together. Can you tell me how to get over the difficulty and get straight combs built in all seven frames? I have the "Guide Book" and was working according to it. My own idea was to remove two or three frames and substitute a division-board so as to cluster the bees more closely together. The gentleman I got them from says I had better let them alone, but I do not want to have the bees on frames that are not movable singly. Any information you may give will oblige—J. S., Crook, R.S.O., Co. Durham.

REPLY.—It should not be difficult to insert a dummy-board—with bee-space below—in rear of the fourth frame. This done, the bees will soon leave the three rear frames and join those in front where the queen is. The three cross-built frames can then be lifted out *en bloc*, and the combs cut away, to be afterwards tied into frames if straight and good, but, if crooked, melt them down for wax, and fit the three frames with full sheets of foundation before replacing them.

[3910.] *Feeding Bees in a Lard Pail.*—I shall be glad if you will answer the following in the B.B.J.:—I have a swarm of this year hived in a lard pail, and, on examining them, find plenty of brood but no stores. The bees seem strong, but, notwithstanding this fact, wasps have been busy going in and out of the entrance almost as thick as the bees themselves of late. There seems to be no way of feeding them in a pail, and so I ask:—What would you advise me to do? I do not want to lose the bees, but they have not got enough food to last half the winter. I send name and sign—DRONE-BEE, Biddenden, Kent, September 20.

REPLY. — We should get some joiner

friend to bore a two-inch hole in bottom (now the top) of pail with an auger, or, failing that, would cut a square hole with a pointed knife. Above this hole place a rapid feeder holding a quart or more of syrup-food, and refill as often as empty till the required quantity is taken down. Also reduce entrance to half an inch to help the bees in keeping out wasps. If the latter again cause trouble and start robbing, only give food at night, removing feeder each morning.

[3911.] *Starting Bee-keeping — Locating Hives.*—I am about to commence bee-keeping by purchasing two established stocks of bees in frame-hives, one holding ten and the other twelve frames. 1. Do you consider these hives unmanageable by a novice? I am told they are. The hives would be exposed to north and east winds, but sheltered by houses from north-east winds. 2. Would you recommend the planting of a hedge or shrubs to protect the hives, or covering them well during severe weather with some warm material? 3. Could they be removed for the winter to a spot nearer house where they would be well protected and warm? Probably a plentiful supply of food is the best safeguard and a strong colony. 4. Will bees find their way back to old habitation if bought locally? — M. A. P., Sutton, Birmingham, September 2.

Reply.—1. Yes, the hives named are as easily managed as any. 2. A hedge sheltering from east winds would be useful, but is not indispensable if hives are well covered on top and kept dry. 3. Hives should not be moved from their summer stands in winter. 4. Not if moved in winter after being confined to their hives for several weeks by cold.

[3912.] *A Beginner's Queries.*—I only started bee-keeping this year, and should be obliged for reply to the following. At the end of July I extracted all honey from supers, and a few days later examined the brood chambers, when I found there was no honey at all in the combs. I gave the bees a cake of candy at once, and have since continued to give candy. The other day I started to give syrup-food rapidly for the winter, and there is at present from 15 lb. to 20 lb. of syrup in the brood-chamber. To-day I was told by a bee-keeping friend that I should have left three or four frames of sealed honey in the hive. What I wish to know is whether the bees will live through the winter on syrup alone, if I give them the requisite quantity (30 lb.) as per "Guide Book."—L'Abeille, Derby, September 11.

Reply.—The bees will do as well on syrup-food as honey gathered from the fields if they have time to seal the food over before cold weather sets in. At the same time, we may say it is always best to leave what stores are found in brood-chambers for the bees' use, or, if found empty after removing surplus, to give a full supply in a rapid-feeder as soon as convenient in early autumn.

Echoes from the Hives.

Ilford, September 20.—My total yield this year from four stocks has been 150 lb.—viz., 48, 45, 42, and 15 lb. respectively, of good-quality lime-honey. No swarms. Indeed, I have not had a single swarm during the six years I have kept bees, nor have I had any complaint from any neighbour of having been stung, although the hives are located in my back-garden in a very populous neighbourhood. I mention these facts for the encouragement of those who are, or would be, suburban bee-keepers. —Geo. S. Faunch.

New Bridge (Cornwall).—Bees have done fairly well around here this season. Forage very plentiful, but the weather has been simply awful, thick fogs hanging over the land all the season from the Bristol Channel. This is my first year at bee-keeping.—J. R.

Bee Shows to Come.

October 3 to 6, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

October 19 and 20, at Kilmarnock, N.B.—Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries close October 6.**

November 5 to 18, at Plymouth. — Annual Show of the Devon B.K.A., in conjunction with the Plymouth Exhibition. Twelve classes, with good prizes, for honey and bee appliances, including special prize of £1 1s., for two 1-lb. sections. Schedules from F. W. Palmer, Turner Cottage, St. Badeaux, Devonport. **Entries close November 1**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances, Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries close November 1.**

Notices to Correspondents & Inquirers.

W. Lillet (Dean).—Small Sample Honey-jars.—Any of the honey-jar manufacturers who have advertised in our pages during the present season supply jars holding from 2 oz. upwards at low prices.

J. B. (Cullompton).—Making Metheglin or

Mead.—The pamphlet, "Mead, and How to Make It," can be had for 2½d., post free, from this office.

F. J. (Mountmellick).—Spacing Frames in Winter.—1. The spacing of frames 1¾ in. apart in winter, as recommended in "Guide Book," is to allow of more bees clustering between the face of combs during cold weather, and thus increasing the warmth of the cluster during winter. 2. We do not know what is meant by "wood-wool packing," but any woollen material answers well as covering for frames in winter.

Busy-Bee (Stafford).—Bee Forage.—Of the three sprigs of heather sent, Nos. 1 and 3 are the common ling (*Erica calluna*), No. 2 being *E. cinerea* (bell-heather). Referring to honey samples, No. 1 is very good in colour, fair in flavour, but only poor in consistency; No. 2 is good for table use; and No. 3 would be suitable for medium class at local shows; but none are up to high show-bench standard.

W. Pringle (Blaydon-on-Tyne).—Candy Making.—Your sample can be used as bee food, but it is not sufficiently boiled, or smooth enough in grain for a good candy. We should not care to add a pound of flour to ten pounds of sugar for feeding so late in the season as this; it is more suitable for early autumn or for spring feeding.

F. L. (Cirencester).—Vicious Bees.—Judging from appearance of queen sent, we should not pronounce her a pure Italian but a hybrid. For an adult queen over a year old she is also one of the slimmest we ever saw—in fact, her appearance is that of a virgin queen. In any case, the account you give of her vicious progeny and their poor working qualities shows it was best to depose her.

J. P. (Caterham Valley).—N. Beta Solution.—We do not advise purchasing N Beta from an ordinary chemist, as the strength of the chemical varies very much. That sent out from this office is selected as suitable for medicating bee-food according to Dr. Lortet's formula, and we cannot answer for the efficacy of any other.

Driven Bees (Derby).—Bee-parasites on Driven Bees.—From our knowledge of the advertiser referred to we feel sure he will do what is right if written to, and if the bees sent were badly infested, as stated, he will meet you in the matter. We have had several communications mentioning the fact of *Braula coeca* being plentiful in some southern counties this year, but we do not hear of the pest in northern districts. Tobacco smoke is the recognised remedy as described in the "Guide Book."

D. M. P. (Greenock).—Sample sent is good Demerara, but, being moist sugar and unrefined, is unsuitable for bees. It is too relaxing as winter food because of the molasses it contains. Refined white crystals of cane sugar should be used.

Honey Samples.

H. H. (Ismgton, Alton).—The pronounced flavour of your sample is from heather, consequently the bees must have made the "two-mile trip" to obtain it.

Rugby.—Sample is from mixed sources—mainly clover. It would do very well for local show if slightly warmed to remove the visible signs of incipient granulation.

J. R. (Cornwall).—No. 1 is granulating, and thin in consistency. It is evidently not well ripened. No. 2 is fair in flavour and colour, but too thin for showing. No. 3 (medium colour), and of fairly good flavour, would do for local show. It is a very sweet honey.

W. R. (Sidmouth).—Of the two samples No. 1 is best, and, except for being a little thin in consistency, is a good honey. It is from mixed sources, the flavour is pleasant and is slightly tinged with that of hawthorn blossom. There may also be some bell-heather within reach of the bees. No. 2 is not so good; it is also showing signs of granulation.

Suspected Combs.

L. W. (Staplehurst).—There is no trace of brood in cells, foul or otherwise; nothing but a little pollen.

J. B. (Winchester).—Comb sent contains nothing worse than pollen, but it was almost eaten away by the larvæ of the true wax-moth. The comb must have been put up several days ago, as it was quite matted together by the tunnel-like webs of moth larvæ.

X. Y. Z. (Midlothian).—No disease in comb, but the queen is evidently a drone-breeder.

S. D. (Staffs).—We can see no foul brood in comb, and the sealed brood seems to be hatching out all right. The fault is to see duplicate eggs in so many cells, also many twin-larvæ, and in some cases three tiny larvæ in one cell, all hatched. We cannot account for these abnormal conditions.

X. Y. Z. (Marton, Blackpool).—Comb badly affected with disease of old standing.

F. R. (Heathfield, Sussex).—Comb sent is just in same condition as that mentioned above. The person whose views you got evidently knew very little about foul brood.

***** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

SOUTH OF SCOTLAND B.K.A.

ANNUAL SHOW.

The thirteenth annual exhibition of the South of Scotland Bee-keepers' Association was held on Saturday, September 13, in St. Mary's Hall, Dumfries. The season, with so much sunshine in the summer months, was exceptionally favourable, and not only did the quality of the show attain a high standard, but there was a record entry, the exhibits reaching the total of 181. A noteworthy feature of the exhibition was that English bee-keepers who have been winning at a great many of the shows south of the Border were strongly represented. The judges were Mr. John Clark, Carnwarth, and Mr. William Hogg, Castle-Douglas. The comb honey exhibits were of exceptional quality, and would be difficult to beat anywhere. Of run honey there was a splendid display, there being keen competition in all the classes, and the quality showed a distinct advance on that of recent years.

The following were the prize-winners:—

OPEN CLASSES.

Three 1-lb. Jars Extracted Honey.—1st and 2nd, James Kerr, Dumfries; 3rd, J. M. Stewart, Mollance; v.h.c., John Ross, Barkerland; h.c., David Johnstone, Greenlaw, Castle-Douglas; c., J. Muir, Burnfoot, Dundrennan.

Three 1-lb. Sections.—1st, J. Ross; 2nd, J. Harkness, Newfield Burn; 3rd, J. Muir.

Single 1-lb. Jar Extracted Honey.—1st, J. Johnston, Dumfries; 2nd, J. Kerr; 3rd, J. Ross; v.h.c., J. Harkness; h.c., J. Muir.

Single 1-lb. Section.—1st, J. M. Stewart; 2nd, J. Harkness; 3rd, D. Affleck, Beeswing.

Beeswax.—1st, J. Ross; 2nd, J. Harkness; 3rd, D. Johnstone; v.h.c., H. Marrs, Newtonairds.

MEMBERS ONLY.

Honey Trophy.—H. Marrs.

Super of Honey.—1st, Peter M'Donald, Hillside, Old Cummock; 2nd, J. Muir; 3rd, Q. Aird, Hardgate.

Super of Honey (under 15 lb. gross weight).—1st, J. Ross; 2nd and 3rd, Q. Aird.

Twelve 1-lb. Sections.—1st, J. Ross; 2nd, H. Marrs; 3rd, J. Muir; 4, J. Harkness.

Six 1-lb. Sections.—1st, J. Ross; 2nd, H. Marrs; 3rd, J. Kerr; v.h.c., J. Harkness; h.c., J. Muir.

Six 1-lb. Sections.—1st, J. Austin, Hardgate; 2nd, J. Muir; 3rd, Q. Aird.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Kerr; 2nd, James Johnston; 3rd, J. Ross; v.h.c., Q. Aird; h.c., J. Harkness.

Six 1-lb. Jars (Light) Extracted Honey.—1st, J. Kerr; 2nd, J. Ross; 3rd, D. Johnstone; v.h.c., Q. Aird; h.c. and c., J. Harkness.

Six 1-lb. Jars (Medium) Extracted Honey.—1st, J. Harkness; 2nd, J. M. Stewart; 3rd, Q. Aird; v.h.c., J. Ross; h.c., James Johnston; c., James Kerr.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, J. Kerr; 2nd and 3rd, J. Johnston; v.h.c., J. Harkness.

Two 1-lb. Jars Extracted Honey.—1st, James Kerr; 2nd, J. Harkness; 3rd, J. Ross; v.h.c., Q. Aird; h.c., James Kerr; c., James Johnston.

Two 1-lb. Sections.—1st, J. Ross; 2nd, J. Harkness; 3rd, H. Marrs.

Six 1-lb. Jars Granulated Honey. 1st, A. Fraser, Palnackie; 2nd and 3rd, James Kerr.

Six 1-lb. Jars Extracted Honey. — 1st, F. Pringle, Overton; 2nd, G. M'Kill, Nelson Street; 3rd, Peter M'Donald.

Six 1-lb. Sections.—1st, G. M'Kill; 2nd, Peter M'Donald; 3rd, R. J. Brindle; Newtonairds.

Stock of Bees in Observatory Hive. — John Ross.

Three 1-lb. Jars Extracted Honey.—1st, Mrs. Aird, Hardgate; 2nd, D. Affleck, Beeswing; 3rd, G. M'Kill; v.h.c., J. Austin.

Three 1-lb. Sections.—1st, Mrs. Aird; 2nd, J. Austin; 3rd, Miss M. Muir, Burnfoot.

KENT HONEY SHOW.

The above annual show was held at Wye, on August 16, and was well supported so far as entries were concerned. The honey was of excellent quality, and the judge, the Rev. M. B. Osmaston (who was assisted by Mr. Jesse Garratt), had rather a difficult task in some of the classes, especially those open to the United Kingdom, where in the three classes there were 33, 27, and 21 entries respectively. The awards were as follows:—

Six 1-lb. Sections. — 1st, F. R. Court, Green Street; 2nd, S. Burden, Headcorn; 3rd, A. Mills, Wye; 4th, T. Head, Canterbury.

Two Shallow-frames Comb Honey. 1st, T. Head; 2nd, J. Harris, Maidstone; 3rd, S. Burden; 4th, R. Sharp, Borough Green.

Six 1-lb. Jars Extracted Honey. — 1st, S. Burden; 2nd, Hon. Mrs. Deedes, Hythe; 3rd, Miss S. Amos, Wye; 4th, T. Head.

Three 1-lb. Sections and Three 1-lb. Jars Extracted Honey.—1st, F. R. Court; 2nd, S. Burden; 3rd, A. E. Allchin, Kennington.

Beeswax.—1st, E. R. Nash, Smarden; 2nd, F. R. Court.

Mead.—1, Miss S. Amos; 2nd, H. Head, Wye.

Honey-cake.—1st, E. Cullen, Wye; 2nd, F. R. Court; 3rd, H. Head.

Display of Bee-flowers.—1st, W. Hills, Kennington; 2nd, Miss S. Amos.

COTTAGERS ONLY.

Two 1-lb. Jars Extracted Honey.—1st, J. Chittenden, Wye; 2nd, H. Reynolds, Wye.

Trophy of Bee-products.—1st, E. R. Nash, Smarden; 2nd, S. Burden.

OPEN CLASSES.

Single 1-lb. Jar (Light) Extracted Honey.—1st, T. G. Hillier, Hurstbourne Tarrant, Hampshire; 2nd, F. G. Uden, Goodnestone; 3rd, Miss D. Edwards, Stamford, Rutland.

Single 1-lb. Jar (Dark) Extracted Honey. 1st, E. R. Nash, Smarden; 2nd, T. Burgess, Willesborough; 3rd, J. H. Inman, Wisbech, Cambs.

Single 1-lb. Section.—1st, A. W. Wetherhogg, Willoughton, Lincolnshire; 2nd, F. Barber, Bourne End, Bucks; 3rd, T. G. Hillier, Hants; h.c., S.E.A. College, Wye.

Frame Hive.—1st, T. Head, Canterbury.

The prizes were distributed to the successful competitors in the evening by Miss C. P. S. Warren, who was assisted by her father, Lieut.-General Sir Charles Warren. —(*Communicated.*)

Obituary.

DEATH OF MR. CHAS. T. ABBOTT.

While preparing for press we learned with deep regret that Mr. Chas. T. Abbott, one of the partners in the firm of Abbott Bros., Southall, passed away at his residence, Vine Cottage, Southall, at an early hour on Thursday, September 28, at the comparatively early age of forty-six years. Mr. Abbott, who leaves a widow and two children, had not been in good health for about a year past, but was out and able to attend to business until a week before his death, when a relapse occurred from which he never rallied.

We hope to refer next week more fully to our late friend's business career, and his connection with the firm of bee appliance manufacturers made famous by his father, the late Charles Nash Abbott (founder and first Editor of the BRITISH BEE JOURNAL). Meanwhile we tender our sincere sympathy, and that of all readers of this JOURNAL, to Mrs. Abbott and family in their bereavement.

Correspondence.

The Editors do not hold themselves responsible for opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

HONEY AND PRICES.

[6040.] *The Heather Harvest.*—One of the worst on record, I presume, will be the general verdict! Yet it is not quite so bad as that, for we had a good gathering during a few days of mid-August. The worst of it was that in most cases, unless stocks were abnormally strong, almost every ounce gathered found its way into the body-box, there, of course, to fulfil a useful purpose in supplying ample stores for bees to winter on, for before the flow of these few days brood-frames were almost all drained dry. When bees presciently had thus stocked the larder they went upstairs as if they meant to beat the record; but, alas! the weather broke, and we got drachms when we fondly expected to find pounds. At an early date they began carrying down the contents of outside combs, and so supers were with drawn, too often with sections partly filled and sealed. Some stocks filled one rack, but most would not average half that number of marketable sections. The price is good, 1s. 3d. per 1-lb. section being easily obtainable, and where sections are well filled and sealed they should make 1s. 6d. A blend sold readily at 1s., and clover 10d. I would strongly urge on all to hold up for a good price. Grocers during the rush in July bought good sections at 7d., and many bee-keepers, anticipating a heavy flow, reduced from 10d. to 8d. needlessly, as the higher price should have been maintained, because in many districts where light soils prevail the honey harvest was almost a failure owing to the severe drought. More combination is required amongst bee keepers to hinder such insensate rushing of their produce on the market. We, too, should inaugurate a Honey-Producers' League to maintain something like uniform prices. If some can get a paying price, and sell their honey at an early date year by year, I fail to see why others cannot search and find a market for their produce. It only wants effort and a small degree of business tact and management to sell out the season's crop before the current year ends.

Mysteriously Disappeared!—I had recently been presented with a valuable all-golden queen imported from America, and

she reached me safely, though looking as if she had been consigned to such close quarters long enough for her comfort. On opening the cage to consign her to the small wire-cloth one for insertion on a comb, I let her out on a pane of the window. My attention was momentarily distracted from her, and in that very brief space of time she had most mysteriously disappeared. All search for her proved vain, although the room was practically turned upside down, and every hole and corner closely scrutinised, with the help of several willing assistants. I never had such a strange experience in all my bee-keeping annals, and the loss was very aggravating. After travelling something like 4,000 miles, to disappear so suddenly and strangely, seems very odd. The fact that she was a gift doubled the feeling of disappointment and chagrin. Fortunately, I had not destroyed the native queen, being superseded. I think it is well to emphasise the moral derived from this forethought. Always retain the old love until you are assured the stranger is to prove a success. Stocks are often heavily depleted during an interregnum while waiting for a substitute to replace a queen who has met with a mishap. It is always well to have more than one string to one's bow.

Mating Queens.—The point noted by Mr. J. Gray is a very important one. Here at least American methods must be very considerably modified, and a part of June and the month of July forms the only thoroughly reliable period when queens can be safely mated. For some years those reared for August mating have been a failure: thus, of a batch of seven this year, only one became fertilised. I have not been very successful with the baby nuclei, and any transference would require to take place in a specially-fitted house built for the purpose. Queen-rearers are a class by themselves, and my opinion is that, even with all modern appliances, and means to boot, they will not suffer much from the rivalry of amateur queen-rearers. The work is, however, of a very fascinating nature where one has the time and the patience to devote themselves wholeheartedly to the pursuit.

Clearing Supers.—I am glad to learn that my mode of clearing surplus-chambers has proved successful. I have not again this season used a "Porter"-clearer, and the new system has proved most efficient under varying conditions. One modification I have tried this year seems an improvement. I rested the supers on two sticks, about 1 in. square and 16 in. long, in order to save bees from being crushed, and by leaving on the quilt above they thus cleared out from below the racks back and front. This ensures that no robbers prowling about get the smell of broken honey, and, moreover, makes quicker work of the clearance, for by covering the rack at sides and back with a carbolised cloth, very slightly tainted, they clear out at the front, and at once race down for the entrance, where they find the only exit by which to join their confrères.—D. M. M., Banff.

THE BEE-SEASON IN HERTS.

MOVING BEES FROM HOUSE-ROOF.

[6041.] Having found pleasure in reading the accounts of other bee-keepers as to how they have fared with their bees this season, I thought a few notes on what I and my bees have done might be of interest. The season here opened none too promisingly; May and the first three weeks of June were very unsettled. The bees, however, were now very strong, and when at last fine weather set in, things soon began to brighten up, including myself. By the first week of July I had two racks of sections on most hives. About that time a little honey-dew was gathered, but a heavy rain-storm came just in time to wash all traces of it away, and at the same time revived the white clover. The limes also, coming into bloom about this time, were freed from honey-dew, and for the first time for several years bloomed during fine weather. My bees were now storing honey fast, whereas I could see by reports in B.B.J. that in other places the bee-forage was dried up. To make a long story short, I have taken from ten hives, spring count, 540 lb. of nice-coloured honey, my best hive yielding 86 lb. extra. I had two swarms; one of which unluckily flew away. This swarm issued at the early hour of 7 a.m. A neighbour heard the "humming," but did not think it was a swarm. They hung on a bough until half-past one, when, going in my dinner hour to see if there were any signs of swarms, I ran my eye along the hives, and saw one showed the well-known "quiet" about entrance, which made it clear that a swarm had gone. I was just in time to see the bees leaving the bough, which hung nearly to the ground. After flying around they made off straight away. I followed across three fields, till, on coming to a belt of trees, I lost sight of them, and they were lost. Two days later, wanting a queen-cell, I examined the hive this swarm came from, and found that the queen had already hatched, all other queen-cells being destroyed. Then I remembered that the wind was very rough and cold several days before the swarm came out, and so swarming was delayed. The same day I heard of a swarm having been seen clustered upon a haycock, and before the men saw it the haycock was scattered, many of the bees becoming

mixed up with the hay. I was surprised a day or two after to find my swarm had returned, but without the queen. On June 24 I saw a fine swarm enter the roof of a three-storeyed house, about three-quarters of a mile from my apiary. On the 27th I succeeded in removing it. The way in which I did so is perhaps worth recording. Carefully removing several tiles, I found five new pieces of comb. These I removed one by one, searching always for the queen. When I had found her I placed her in a travelling cage. This I tied in the top of a straw skep, replacing some of the tiles until skep covered the hole, then holding a piece of comb among the bees until they had gathered upon it, I shook them in the skep with queen, which latter I placed over hole, then wrapped all up snug, and could soon hear bees going up. Next morning at four o'clock I spread a cheese-cloth on the tiles, tied up the skep in same, and returned home rejoicing. This swarm has made a splendid stock.—H. SIMMONDS, Chipperfield, King's Langley, Herts.

DUELS BETWEEN QUEEN-BEES.

[6042.] Referring to the article in B.B.J. of September 21 (page 379) headed "Duel between Queen-bees," I will, with your permission, describe one I witnessed between two newly-hatched queens this summer. A neighbour sent asking me to hive a swarm one rather cold, dull morning in the end of June (bees about here seem to prefer to swarm on dull or windy days this year). As she had only one stock, and wanted some honey, I advised her to let me return the swarm to the parent hive. This was agreed to; but, as I had not time then, I deferred the proposed operation until the evening. On opening hive, and examining frames, I found between a dozen and twenty queen-cells, and on one frame was a newly-hatched queen, while on the next were two queen-cells just opened. I therefore decided to hive the swarm in a new hive; this done, and thinking that my neighbour would like to see a queen bee and the cells they hatch from, I put a handful of cells in my pocket and repaired to her kitchen. By that time two of the young queens had escaped, and were crawling over my coat, so I carefully placed them together on the table a little distance apart. They immediately began "piping," and, having located each other in this way, they went for each other like a pair of game cocks. Seizing each other round the body, they rolled over and over in mortal combat, until one succeeded in getting the tip of her abdomen against the centre of her rival's thorax, when she gave one swift stab, and the wounded queen was instantly paralysed, and in about two minutes was dead. There did not seem to be any hesitation in this duel; it was one supreme effort for mastery with an abrupt ending. Last summer I saw a young queen sting a worker to death under uncommon circumstances. Examining a neighbour's hive—in order to cut out queen-cells, and thus prevent a "cast"—I found several ripe cells. I took these in my hand, after cutting them out, when the lid of one cell shot open and the young queen crawled out. Having a stock of my own that had swarmed a day or two previously, I thought I would introduce her with a view to saving time. I decided on the unorthodox plan of lifting out a frame with bees and allowing the young queen to crawl on to it and, if the bees on frame accepted her, replacing it on the hive. I had placed her in a match-box for conveyance home (a distance of one mile). On releasing her on to the frame she began to rush wildly about, and then seized a worker, and flying off with it a distance of a couple of feet, dropped into the short grass, where I saw her curl her tail in and sting the worker, which seemed to die almost immediately. I replaced her on frame, where she quietly crawled about as well-behaved queens usually do, and was accepted, and a good queen she has turned out to be. With regard to "earwigs emptying supers" (as mentioned in BRITISH BEE JOURNAL of September 21), I have no doubt they will, given plenty of earwigs and plenty of time. I have had the cappings perforated with small holes by them.—MID-OXON.

P.S.—Though I have since tried to make newly-hatched queens fight on a table, I have not succeeded.

BEE-CANDY ON THE SHOW-BENCH.

[6043.] A thought occurred to me when visiting the late show at the Crystal Palace that a class might be added to show schedules for candy, as a bee-food, open to non-manufacturers of bee-goods. The show-benches are, as we know, visited by a good number of beginners in the craft, who have rather a confused idea what really good bee-candy is like, and it would be instructive to these at least to have such on view; not only so, but by confining the class to bee-keepers only, as distinct from the manufacturers, it would probably induce others to try their hand at candy-making.

The season here has been, on the whole, very fair, resulting in some nice "takes" of honey, though the heather did not yield quite so well as it promised, but what there is is of excellent quality, especially that from the "ling."—W. A. WOODS, Normandy, Guildford.

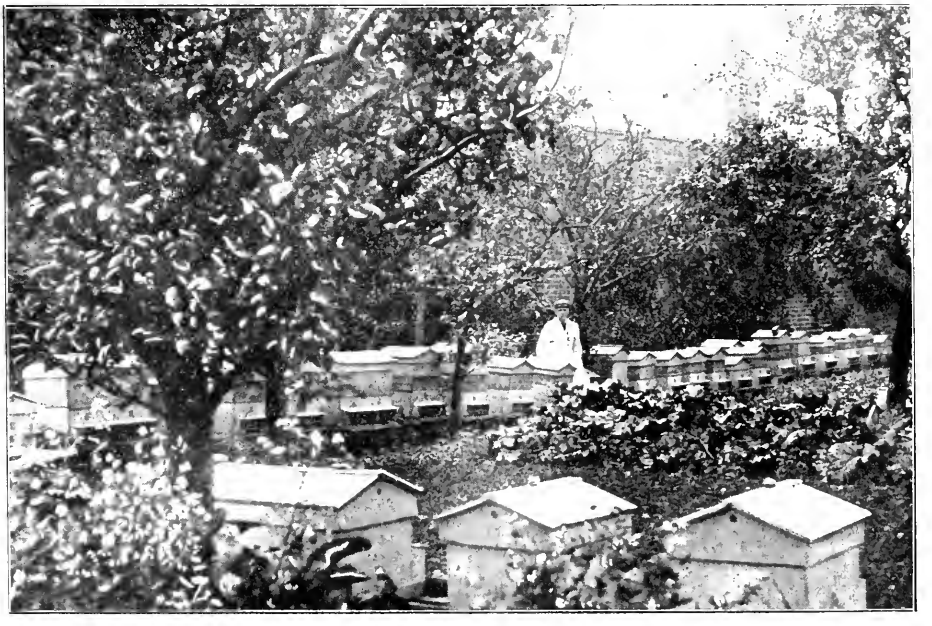
(*Correspondence continued on page* 396.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Elmhurst, seen in his bee-garden below, is evidently a bee-man of the right sort, not content with being told what to do, but learning how to do it in the right way. One who can keep his bees healthy in such a neighbourhood as he mentions may be trusted to get on. He says:—

"I started bee-keeping about the year 1889 with a stray swarm. From this I had two swarms the next year, so that up to that time I was a skeppist. I then made a start on modern methods of bee-keeping, being advised to get a frame-hive. I transferred one of my stocks in skep into it, but the bees died, as did also those in other skep. My start, therefore, was a disastrous one. But it seemed as if I was to be a bee-keeper, for another swarm came to me, and this I hived successfully in my frame-hive. The bees got on all right. I then made two new frame-hives and gradually worked my way up till in 1900 my apiary consisted of forty hives. I had bought seven frame-hives from our local clergyman, who was leaving the neighbourhood, and this helped my increase; but I have always had a liking for a few skeps, and in the autumn I usually buy up a lot of weak skeps—these being chiefly second swarms if healthy, clean, and free from wax-moth, at from half-a-crown to four shillings each. I put them on a box-stand with a circular hole, that holds a crate of shallow frames containing some honey, which the bees clear out, only to get another put in its place. I thus get a good stock built up by October full of young bees, which, if stimulated in spring, generally give me a good swarm or two. Then twenty-two days after the first issue, I drive the bees out and put them on foundation. This is one of my ways of increasing stocks, as well as by driven bees. I also do my utmost to prevent swarming, and for many years have never had a frame-hive swarm. Another thing, I believe in leaving queens in hives, having found that the bees will not tolerate queens that suffer from old age, as they are generally supposed to do, but re-queen themselves far more often than we are aware of, especially in the honey-flow time, when the brood-chamber is let alone. I have often found on opening a hive to show an old queen that a grand young one has taken her place at the head of affairs. I have had shades for all of my hives. They look very nice with snow on, but room given with judgment is the best preventive of swarming.



MR. E. B. ELMHURST'S APIARY, KNARESBORO', YORKSHIRE.

"Although I live in a neighbourhood rotten with foul brood, I have kept clear of it by keeping up my spring and autumn cleaning, and regularly painting all hives, together with the use of naphthaline and using carbolic, besides medicating all food given.

"I took my first prize in 1896, and since

then carried most of our local classes, but have only got a third in an open class. In 1899 I secured my third-class expert's certificate, and am honorary expert to several local associations."

CORRESPONDENCE.

(*Continued from page* 394)

THE BEE-SEASON IN NOTTS.

[6044.] I have never been favoured with the big "takes" of honey which we hear of in the B.B.J., but having this year secured my record harvest, I thought it might interest and encourage some at least of the many readers of your valuable weekly to have a few details of what has been done. I have been a "modern bee-keeper" ever since the year 1877, and the converts I have made to the "better way" are so numerous that I have lost count of them; one is a first-class expert known to most bee-keepers in the British Isles. But about the bee-season. Let me say I have two colonies of bees in frame-hives standing in my sister's garden at Mildenhall, Suffolk, and these two have yielded a gross weight of 295 lb. of beautiful, light-coloured honey, including forty-two sections. I pay an annual visit to Mildenhall—which is my native place—and have a young friend there who was only a skeppist when I induced him to start on modern lines about ten years ago. He still has some skeps, but now owns eighteen or twenty stocks in frame-hives. I might say, in addition to being a fruit and seed growing district, the farmers there grow an abundance of sainfoin.

I cannot boast of any very large "takes" here in Newark—where I live—although I secured a first prize and silver pendant at our Notts B.K.A. Show this year. My largest "take" in Notts is 85 lb. from one hive. Enclosed is a photo of myself and my Newark apiary, and I shall be pleased if you consider it worthy of a place in "Homes of the Honey-bee." — ROBERT MUCKENDEN, Newark, September 30.

[Very pleased to get photo, and shall give it a place in our bee-garden pictures in due course. EDS.]

A RE-START WITH BEES.

[6045.] Perhaps you may think it worth while to publish the following remarks in your "Correspondence" columns from an old-time bee-keeper who is now engaged in making a *re*-start with a few hives under the following circumstances: — I began bee-keeping here within three miles of the Manchester Exchange—in 1884, and for some years enjoyed the friendship of the late Mr. Wm. Carr, of Newton Heath. The conditions in those far-off days were a little more favourable to the hobby than they are now, but at no time can they be said to have been perfect. The city smoke and grime pursue us even here, and although we have some 400 acres of farm land on the south and a public park of 60 odd acres on the north, the progress of buildings has rendered it less and less an ideal spot for an apiary. Then the putting up of a greenhouse, potting shed, boiler house, and frames restricted my available space (because I never dared entrench on the garden proper), and some six or eight years ago I had to abandon the pursuit of bee keeping altogether, leaving all my appliances on hand.

I have now, however, a small piece of ground in Denbighshire, where, within the last two months, I have established a couple of stocks of bees, and being a bit rusty in the details of management, I am contented with these two colonies at present; but, meantime, I am occupied in looking up and transporting my dozen or so of hives and bee-tackle, while my enthusiasm for the craft is as great as ever after slumbering so long, and I am hoping to do well with them in a district that contains plenty of bee-forage and some heather. Can you give me (or may I invite your correspondents to give me) the address of any bee-man within easy hail of Colwyn Bay, so that we may compare notes? Also, can you refer me to the secretary of the Denbighshire B.K. Association? Name, etc., for reference.—CYMRU, Manchester, September 28.

[With regard to the Denbighshire B.K.A. its hon. sec. is Mr. Wm. Richards, Gabalfa, Cardiff, who will, we are quite sure, supply any information in his power likely to help our correspondent in his *re*-start with bees. If this meets the eye of any reader residing near the place mentioned (Colwyn Bay), perhaps he will send address, etc., to this office for forwarding to "Cymru."—EDS.]

SOME BEE EXPERIENCES.

[6046.] A stray swarm of bees came to my place on June 22. When examining the frames of this swarm on July 10 I found nearly a score of queen-cells just started. We had a severe thunderstorm on the previous afternoon, dark clouds obscuring the sun, with heavy rain coming down and causing the bees to rush home in thousands, and as I could not find a queen, my impression is that the sudden storm was in some way responsible for the death of the latter.

About ten days afterwards I found there was a fine lot of sealed brood in the hive, so decided to divide the frames, and transferred one-half into each of the two compartments of a "Wells" hive, with an outside "entrance-divider" 7 in. wide and the

height of hive. Both lots had about an equal number of queen-cells, and both seemed to do well; but, after examining the frames again on August 25, I found one lot had a drone-breeding queen. Later on I put both close together with a perforated separator between, and about a fortnight ago removed the latter, thus uniting the bees. There was a considerable number of drones among the last-named lot, with a few drone-cells sealed over, and although the bees are carrying in pollen to day (September 30), there are still some drones in the hive, I have no doubt that the storm of July 9 caused the death of very many thousands of bees. I know that mine stored very little surplus afterwards, though up to that time they seemed to be doing very well indeed.

My method of extracting wax from old pollen-combs is to get a tin of about 2½ in. deep, of such size as will easily fit into a cooking-range (square or oblong). I next get another tin to slip into this, say ½ in., but with a wire-strainer bottom. I pack this full of comb edgewise, but upside down, with about 1 in. depth of water in lower tin, to keep the combs from burning. As the wax melts and runs downwards, the cells will crumble away one by one, and every particle of the wax drains through. I have tried all the methods of extracting wax, but the above succeeds best with me, even for rendering cappings. Of course, a roasting-oven is preferable, as you can regulate the heat so as not to burn the honey draining from the cappings.—Frank Jarvis, Bucks, September 30.

SWALLOWS AND BEES.

[6047.] One summer evening a few years ago I was talking to a fellow bee-keeper in his garden after a wet day, when we noticed the bees flying out unusually strong (probably after having been kept in by the rain). In a short time we had our attention attracted to a loud twittering of swallows, and it seemed as if the birds gathered from all over the neighbourhood, darting backwards and forwards amongst the flying bees. My friend asked what I thought they were doing, and very shortly, after careful watching, we concluded that they were catching the bees for supper. We shouted and threw stones at them, but the game went on until, I supposed, they were satisfied for the night.

I have also seen sparrows sit upon the house-top and fly up and catch bees as they were going over the house from the fields.

From observation I have no doubt that swallows, sparrows, tits, and other birds do occasionally eat bees.

The honey season in this Midland district has been very poor, although the little honey we have is of good quality. Many bee-keepers have secured scarcely any surplus, and my own average is only 25 lb. per hive with no swarms, but I have had to feed up for winter. Only very few in this district have taken as much. We had plenty of clover in the pastures for a month, and good weather, but the bees did not work; it was probably too dry, as we had scarcely any rain during May, June, and July.—Thomas Harper, Uttoxeter, Staffs.

WAX RENDERING.

[6048.] In Mr. Macdonald's account of a recent French invention for extracting wax from old combs (page 386, B.B.J., September 28), it should, I think, have been mentioned that in place of the ordinary boiling water a saturated solution of common salt is used. In the increased temperature of 230 deg. Fahr., thus obtainable, the wax becomes exceedingly fluid, while mechanical separation is rendered easier owing to the peculiar density of the solution. The salt has in itself a purifying effect.

The machine is simple and is said to be thoroughly efficient. It can be obtained for 15 francs (about 12s.) from Monsieur Kühn, La Chaille Saint Claude, Besançon, France. I am not aware whether the invention is as yet protected in this country. —H. J. O. Walker, Lieut.-Colonel, Leeford, Budleigh Salterton.

BEES REFUSING TO UNITE.

ANOTHER BEE-KEEPER'S EXPERIENCE.

[6049.] In your issue of the 14th inst. (6014, page 366), one of your correspondents states that it is useless to try to do anything with queenless stocks of bees or driven lots of bees with a drone-breeding queen at their head. May I be allowed to say that I have this month united driven bees to three queenless stocks, and also to one having a drone-breeder, in each case without the least fighting? I think there must be some mistake or some fault in the method of procedure followed by your correspondent, Mr. Frank Jarvis, or his experience would not have resulted in failures as stated. The queens of the united lots I have referred to are now breeding rapidly, considering the time of the year.—John Gedye, Cornwall, September 28.

Queries and Replies.

[3913.] *Small Frames for Nucleus hives.* —With reference to article 6030, on "Raising Queens and Increase," which appeared on page 377 of your issue of B.B.J. on 21st inst., I shall take it as a favour by your correspondent "Amateur"

informing me if the small frames referred to (6 in. by 5½ in.) can be purchased from a manufacturer? And, if so, will he kindly give name and address through your columns addressed—Togo, Ayrshire.

REPLY.—If this meets the eye of our correspondent "Amateur," he will no doubt be good enough to supply such information as is required. Meantime it is safe to say that no manufacturer makes and stocks small frames such as are named. There is not a sufficient demand for such tiny frames, but any maker, however, would no doubt make them to order.

[3914.] *Moving Hives Indoors for Winter—Giving Sugar-syrup for Completing Supers.* — Will you kindly reply to the following queries? — 1. I have a barn on my premises and ask if it would be of any advantage or benefit to the bees if I brought the hives into it so as to keep them under cover during the winter 2. In the latter case when should I move them in and out again? 3. I have some unfinished supers still left on the hives. Is it advisable to take them off? 4. If the hives are put under cover could I feed the bees so as to enable them to complete the supers?—J. W. W., Leeds, September 28.

REPLY.—1 and 2. It is always best in this country to winter bees on their summer stands. 3. The unfinished supers should either be removed at once for extracting, or left on the hives as winter food for the bees. 4. The practice of giving bees sugar-syrup to enable them to complete unfinished supers — though formerly in vogue among unscrupulous exhibitors at honey shows, has happily been discontinued for some years past. Without in the slightest degree attributing motives to our correspondent, we think he will, on reflection, agree that it is a dishonest practice and should be put down with a strong hand.

[3915.] *An Amateur's Queries.*—Would you kindly give me a few words of advice in B.B.J.? I have two hives, and early in July I placed two racks of drawn-out sections on each. This, no doubt, prevented them from swarming by "giving room in advance of requirements." The bees entered the sections at once and started work in them. About the end of July the top-rack of No. 1 hive seemed pretty full of sealed honey, so about a week later I decided to remove it, as the nights were getting cold, and the bees deserted the sections, I presume, for warmer quarters. But this is not all, I found when I examined sections there was not a single well-filled one in the whole lot! I therefore ask:—Is it possible that the bees have filled the brood-chamber with honey from the sections? 2. Will bees only begin to work in bottom-rack when the top one is completed? I ask this question because after removing the top-rack from No. 1 hive, bees refused to work in the rack left on. 3. Does the use of the queen-excluder induce the bees to store more honey in supers when working for sections? It would appear to be so, as a bee-man not far from me has had an abundance of well-filled sections, and he always uses excluders. 4. Would it be good policy to fit a frame or two up with sections, separate them from brood-nest by excluder, instead of filling up the whole body-box with brood-frames? 5. Could I work such frames as I propose above for surplus honey without depriving the bees of breeding space? 6. How many frames are used for brood, and are these filled with honey when bees are hatched out? 7. Is it possible to give bees too much smoke when manipulating? Hoping my many queries will not occupy too much space, I enclose name and sign—T. H., Northumberland.

REPLY.—Before briefly replying to the above numerous queries, we must explain that you cannot be taught the art of bee-keeping through this column. A guide-book is indispensable for all beginners, and without one, success is more than doubtful. For the rest we reply:—1. Bees always carry the contents of supers down to brood-nest if left on till the honey-season has closed. 2. No, bees usually work in two or more racks if honey is coming in well. 3. Excluders below sections are supposed by some bee-keepers to retard work rather than help it on, but they prevent sections being spoilt by brood. 4. Sections worked in frames in brood-nests have been well tried some years ago and proved unsatisfactory. 5. No. 6. Most hives are fitted with ten or eleven frames in brood-nests, and all surplus should be stored above these. 7. Yes, very possible, and it is very bad for the bees to give too much smoke at any time.

[3916.] *Queens Mating and Foul Brood.* —1. May I ask if you think there is any danger of foul brood being communicated by young queens mating with drones coming from foul-broody hives? 2. Could you, or any B.B.J. reader, tell me where a good sugar-boiling thermometer could be got in England?—BR. COLOMBAN, Buckfast, S. Devon.

REPLY.—1. We do not think there is any need for alarm on the point mentioned above. 2. There should be no difficulty in purchasing a suitable article for the purpose mentioned in London. Write to Mr. Louis Casella, make of scientific instruments, Holborn Bars, London, W.C.

[3917.] *Combs Broodless in October.*—As a reader of the B.B.J. and *Record* for five years, your opinion on the following will greatly oblige:—When examining my bees

to-day I found one stock had no brood whatever in the combs, nor were there any eggs visible, and I could see nothing of the queen. I may also mention that the stock referred to has thrown off two swarms this summer and, therefore, the queen must be a young one. This makes me ask:—Is it usual for a young queen to cease laying early in autumn? If so, would a little stimulative feeding cause her to begin laying again before the cold weather sets in? The stock in question has plenty of stores in combs. I enclose name for reference and sign—ANXIOUS, Derby, October 2.

REPLY. — You should first make quite sure that the stock is not queenless by searching for the queen till she is found, if there is one in the hive. On the other hand if there is a mated queen in the hive it would be very unusual indeed for her not to have started laying before now. Our own impression is that the colony is queenless, and we should take steps to remedy this by purchasing a young fertile queen for it.

[3918.] *Bees Dying.* — Some days ago I took the honey from my hive. I put the wet frames, with some small bits of honey left in them, in the tool-house. Next morning there were hundreds of bees in the place busy carrying off the honey, and the following morning they were still there, but very drowsy, as if hardly able to move. The hive they came from is only a few yards away. Up to the second morning after, the bees had not gone, so I took a feather and gathered them in a heap, and left them in a spot where the sun shone on them, and in a few hours half of the bees had flown back to the hive, the other half are dead. Can you tell me the reason of their not returning to the hive?—J. W., Poulton-le-Fylde, Lancs, September 27.

REPLY.—The bees, no doubt, after filling their honey-sacs in clearing up the frames, had become so chilled and benumbed as rendered them incapable of flight. Those found dead would probably have been too far gone with the cold as to render them beyond recovery.

[3919.] *Keeping Bees in Greenhouse.* — A friend has offered me either a Golden queen or a Carniolan, and I should like to take advantage of his offer. I have requeened three strong colonies this month, and do not like to destroy one of the new queens as they are all laying well just now. I have also a swarm in a straw skep. Do you think I could drive them into a frame-hive and after removing the queen away from driven bees introduce the new one to them? I know it is late to put bees into a new hive now, but I have a range of glass-houses (heated in cold weather), and I thought it might be possible to put the new hive in there and feed up rapidly. There would be plenty of room for the bees to take a flight (the houses are 100 ft. by 12 ft.), and they would not be exposed to the weather and so get killed. Do you think that plan would answer? I hope I have made my case clear to you, because having looked through the "Guide Book" and all B.B.J.s and *Records*, I cannot find what I wanted to know. I could get a few frames of bees and honey to start a new colony if you do not think it would answer to drive the skep, and consider it would answer to winter the new hive in the greenhouse. Your reply will much oblige—A. SUNLEY, Yorks.

REPLY.—It would answer to drive the bees from skep as proposed, and give the "Golden queen" to the driven bees if a few frames of comb are available on which to put the driven bees. But if you can get a few combs containing honey, and covered with bees, it will be still better, as enabling you to make up a strong stock for winter headed by the Golden queen.

[3920.] *Late Swarming.* — On Saturday, September 16, I united several of my stocks, but next morning on going down to where the hives stand, I found the whole of my bees very much excited and restless. The same afternoon, about 3 p.m., a neighbour called to tell me that my garden was full of bees. I went out to investigate, and right enough there was a swarm. After getting the bees into a skep, I examined them in the evening to try and find the queen. I turned them out three times but failed to find her, and this difficulty makes me ask:—Would a swarm cluster without a queen, and what would be the cause of a swarm issuing so late in the season? Also to make matters worse I could not return the bees to parent stock, as I did not know the hive they issued from. Would you recommend me to overhaul my hives to find the one from which the swarm issued, or should I unite to any of the stocks? I will esteem it a great favour if you will answer in next issue of B.B.J.—S. H., Aberfeldy.

REPLY.—The cluster of bees found were, in our opinion, not a natural swarm at all, but bees that had lost their queen and become demoralised during the turmoil caused by the "uniting" operations, as stated. We should unite the bees to any other of your colonies that may need strengthening in population. Do not overhaul your hives for the reasons we have mentioned above.

SEPTEMBER RAINFALL.

Total 1.65 in.
Heaviest fall .48 on 8th.
Rain fell on fourteen days.

W. HEAD, Brilley, Herefordshire.

Echoes from the Hives.

Privett, Alton, Hants, September 30.—The bees in this neighbourhood have not been so satisfactory as was expected in the early spring; most of the honey gathered has been of excellent quality, but not by any means plentiful in quantity, while some is very poor stuff. There was the smallest display of honey I have seen at the cottagers' garden and flower shows this season for many years past.—F. G. Ayling.

Bee Shows to Come.

October 3 to 6, at the Agricultural Hall, London.—Show of Honey and Bee Produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, etc., including the valuable Silver Challenge Cup of the B.B.K.A. **Entries closed.**

October 12 to 21 in Waverley Market, Edinburgh.—Honey Show, in connection with the Ninth Annual Edinburgh and Midlothian Industrial Exhibition. For particulars apply A. T. Hutchinson, 35, Leith Street, Edinburgh.

October 19 and 20, at Kilmarnock, N.B.—Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries close October 6.**

November 5 to 18, at Plymouth. — Annual Show of the Devon B.K.A., in conjunction with the Plymouth Exhibition. Twelve classes, with good prizes, for honey and bee appliances, including special prize of £1 1s., for two 1-lb. sections. Schedules from F. W. Palmer, Turner Cottage, St. Badeaux, Devonport. **Entries close November 1**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances. Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries close November 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Errata. We are requested to say that the winner of 4th prize in class for light extracted honey at the "Grocers'" Exhibition was the Rev. O. K. Williams, not R. Williams as reported on page 371.

G. Sheldon (Sutton Coldfield).—Suspected Disease in Combs.—A beginner in bee-keeping of only a few weeks' experience can scarcely be competent to judge whether a comb is affected with foul brood or not. Consequently, we should need to see a sample of comb referred to before giving advice with regard to it.

W. Yarwood (Beattock, N.B.).—1. Mr. Cheshire's pamphlet, "Honey as Food," has been out of print for some years. 2. The amount of foreign honey imported into this country appears regularly every month in our pages, and has done so for many years past, the total year's imports being published once every year (*vide* B.B.J. of January 19 last, page 29).

J. Dawson (Wolverhampton).—Moths in Combs.—The three larvæ sent are those of the small moth such as harbour in saw-cut of frames. The larvæ of the true wax moth (*Galleria cereana*), is often an inch long when full grown, and works great havoc in combs infested with it. We cannot name the other larvæ enclosed in box, the cocoon being so tough that contents were destroyed in tearing it open.

F. W. H. (Devon).—Insect Nomenclature. —The insect sent is the female of one of the moths in which the wings of the female are only rudimentary, giving it a peculiar appearance. It is probably the vapourer moth (*Orgyia antiqua*), which is common in September near woods almost everywhere. Its presence on the alighting-board of a hive must have been quite accidental.

G. W. G. (Armathwaite).—Making Candy. —Your sample of candy is excellent; equal to any we have seen for a long time.

Honey Samples.

R. H. (Cornwall).—Sample is an excellent honey. Good on all points.

E. W. (Salisbury).—We should place the samples in the following order with regard to merit:—4, 2, 1, 3.

Suspected Combs.

J. A. (Herts).—There is foul brood in comb sent, though it appears a recent outbreak and has not made much headway, if comb sent is a fair sample.

F. H. (Bristol).—Comb is affected with foul brood, and, as stock is weak in bees, we advise total destruction, to avoid risk to the other hives close to.

"T." (Weston-super-Mare).—There is no trace of any brood at all in bits of comb received. The "indented" cell referred to contained old pollen only.

N. A. W. (Renfrewshire).—Comb sent contains nothing worse than honey and pollen, so there need be no fear of disease. It is not unusual for queens to have ceased laying for the season in October.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONFERENCE OF COUNTY REPRESENTATIVES.

The meeting of representatives of County Bee-keepers' Associations, convened by the B.B.K.A., was held at 105, Jermyn Street, S.W., on Thursday, the 5th inst., at 4 p.m., for the purpose of furthering the interests and general welfare of the bee industry and the maintenance of friendly relations between the parent Association and its affiliated societies.

In the unavoidable temporary absence of the Vice-chairman, Mr. T. I. Weston—who was unable to attend till later in the day—Mr. E. D. Till was voted to the chair, and among those present were the following ladies and gentlemen:—General Sir Stanley Edwardes, Revs. R. M. Lamb and W. E. Burkitt, Dr. Elliot, Mrs Ford, Miss Ford, Miss Gayton, Miss K. Hall, Miss E. Hatch, Mrs. Mason, and Mrs. Pearman; Messrs. G. R. Alder, R. T. Andrews, L. Belsham, Thos. Bevan, W. Boxwell, E. J. Burtt, W. Broughton Carr, C. Dunn-Gardner, G. E. Faunch, C. Harman, W. Hatch, Geo. Hayes, Wm. Herrod, G. H. Lander, J. C. Mason, A. G. Pugh, J. P. Phillips, J. Price, A. E. Paul, W. F. Reid, P. Scattergood, H. G. Stoneham, A. Seth-Smith, H. Sayers, jun., Henry Sayers, G. E. Shaw, E. D. Till, F. B. White, Ernest Walker, Thos. I. Weston, S. Watts, E. J. Warren, A. D. Woodley, T. W. White, and the Secretary.

Mr. Till, on taking the chair, opened the proceedings by welcoming, in the name of the B.B.K.A., the representatives of the County Associations who had been able to respond to the invitation of the Council and attend this meeting. Some few members had written regretting their enforced absence, among which was Mr. Weston, who, however, hoped to be present at a later stage of the proceedings. The first subject for discussion on the agenda paper was "Village Bee-clubs"; second, "The Unequal Sizes of Sections"; and third, "The Strength of the 'Standard Frame.'" At present, however, his (the Chairman's) business was to ask Mr. Young (Secretary of the B.B.K.A.) to read the report of the Committee on the foul brood question.

The Secretary said there was nothing new to the representatives and members in what he was about to read, the substance of which had already appeared in the columns of the B.B.J. The Committee, invited twelve months since to make investigations and report on the subject of foul brood legislation, had held meeting after meeting, when the same was fully discussed. Following on that they had entered into communication with the various county councils for the purpose of finding out how far those bodies would support any legislation against foul brood. Up to nearly the middle of July the answers already announced at length in the JOURNAL had been received, which information was sent on to the President of the Board of Agriculture on July 12. He (the Secretary) then read the report, and concluded by saying that the Committee of the parent Association thought it right that they should lay the same before the meeting, seeing that it was an assemblage of county representatives which had appointed them to do their work.

The Chairman said the division of opinion among county councils was about equal regarding the desirability of legislation. Then, the opinions of the largest bee-keepers were unfortunately adverse to any statutory enactment, as they resented all interference, and such fact must weigh in the scale. These facts, coupled with the difficulty of obtaining legislation, and the trouble also of securing efficient inspection, which would be immense and expensive, had determined the Committee to take the action they had done. He (the Chairman) remembered some years ago a deputation from the Council waiting on the Board of Agriculture, when Sir Thomas Elliott (Permanent Secretary to the Board) made the pregnant remark: "Gentlemen, you must have due regard to the proportion of things." Everybody knew that efforts had been made for many years to obtain legislation in reference to cattle disease and many other things connected with agriculture, and when one contrasted the importance of that with the bee-keeping industry, and considered the immense pecuniary interests involved in the former, it was easy to appreciate the meaning of Sir Thomas's remark. He thought there was no doubt the Board were of the same opinion still; and effluxion of time had had the effect of convincing him that there were enormous difficulties in the way of securing an Act of Parliament, even if every bee-keeper were in favour of it; but when unanimity did not prevail among beekeepers themselves it was obvious that all attempts to legislate must prove abortive. However, the Committee had done their best, and had expended a huge amount of time and labour in getting together statistics, and preparing their case for the consideration of the Board; and although they had to acknowledge defeat, it must not be supposed that their efforts had been fruitless. The action taken would certainly do the cause good, and let the Government see that bee-keeping was a growing industry in the country. As the meeting was one of association representatives, he thought that a resolution adopting the report should be moved and submitted to it. There seemed

to be very little chance of bee-keepers ever being of one mind on the question of Parliamentary powers. Each one had his own convictions, and no doubt held them honestly; but he (the Chairman) did not think any useful purpose would be served by further attempts to push a Bill of the kind drafted, for if the Board of Agriculture could not carry it, no bee-keeper, however pushful he might be, could do so.

Mr. R. T. Andrews (Herts) said legislation was hardly to be expected whilst so many larger and more important subjects demanded the attention of Parliament. The report was a very able one, and he was very pleased to move its adoption.

Mr. Watts (Hunts) seconded the motion, but suggested the addition to it of an expression of thanks to the Committee for their arduous labours in connection with the matter (to which the mover nodded assent). He acknowledged the justice of Sir Thomas Elliott's remark, and thought bee-keepers would be very ill-advised to push their attempts to obtain a law further at present.

Mr. Scattergood (Notts) supported the resolution most thankfully, and said that although legislation could not be secured, he thought it might be possible to deal with the disease in another way—viz., through the county councils being approached with the view of obtaining pecuniary support for the county bee associations.

Mr. F. B. White (Surrey) strongly endorsed the resolution, and said the Council were to be congratulated on the course they had taken, as there was really no chance of obtaining legislation.

Mr. Stoneham (Berks) said that when this subject came before the Berks County Council it was felt that unless the application of the provisions of the proposed Act was made compulsory, and not permissive, legislation would be useless. County councils, being conterminous, it was obvious that if adjoining jurisdictions held opposite views on the subject, the protection afforded would be of little or no value.

The Chairman said it was clear there was a consensus of opinion that the report should be adopted, and he had the pleasure of submitting the resolution in accordance therewith. Although they had not obtained what they wanted, still some good was bound to result. They had at least shown the Board of Agriculture that bee-keepers were making an honest endeavour to solve the difficulty. In recognising what the Committee had done he was glad to bear witness to the energy and hard work shown by Mr. Young, who had done his best to bring the attempt to a satisfactory conclusion.

The resolution was carried unanimously.

(Report continued next week.)

THE DAIRY SHOW.

The British Dairy Farmers Association held their thirtieth annual show at the Agricultural Hall, London, on Tuesday, October 3, and three following days.

The honey section was staged in the Minor Hall, and a large display of very fine honey was shown, the total entries numbering 124. The space occupied by the report of the Conference this week only allows for insertion of prize list. Further comments on the exhibits must, therefore, be reserved till next week.

Mr. W. Broughton Carr and Mr. P. Scattergood undertook the duties of judging, and made the following awards:—

Twelve 1-lb. Jars (Light) Extracted Honey.—1st, T. G. Hillier, Hurstbourne Tarrant, Andover, Hants; 2nd, Richd. Brown, Somersham, Hunts; 3rd, Rev. R. M. Lamb, Burton Pidsea Rectory, Hull; 4th, S. Cartwright, Shawbury, Shrewsbury; r. and v.h.c., John Berry, Llanrwst, North Wales; v.h.c., H. W. Seymour, Henley-on-Thames; Arthur Fox, Bardsea, Ulverston; and Jas. Lee and Son, Highbury, London, and Andover, Hants.

Twelve 1-lb. Jars (Medium) Extracted Honey (other than Heather).—1st, Geo. M. Tune, Vioncysyllte, Llangollen, North Wales; 2nd, Jas. Lee and Son; 3rd, E. C. R. White, Newton Toney, Salisbury; 4th, Wm. E. Hyde, Ledbury, Herefordshire.

Twelve 1-lb. Jars (Dark) Extracted Honey (including Heather Mixture).—1st, Jas. Lee and Son; 2nd, Richd. Brown; r. and v.h.c., E. C. R. White; h.c., Fredk. J. Old, Piddington, Northants.

Twelve 1-lb. Jars Extracted Heather Honey.—1st, Mrs. F. F. Upton, Rugeley, Staffs; 2nd, G. T. Walden, Pirbright, Surrey; 3rd, Thos. Walker, Esthwaite. North Lanes; r. and v.h.c., Wm Sproston, Shugborough, Staffs.

Twelve 1-lb. Jars Granulated Honey of 1904 or any previous year.—1st, H. W. Seymour; 2nd, J. Boyes, Cardiff; 3rd, Jas. Lee and Son; r. and v.h.c., Richd. Brown,

Twelve 1-lb. Sections of Comb Honey.—1st, John Carver, Wellington, Salop; 2nd, E. C. R. White; 3rd, Jas. Lee and Son; r. and v.h.c., Richd. Brown; v.h.c., C. W. Dyer, Compton, Newbury, Berks; h.c., H. W. Seymour.

Display of Comb and Extracted Honey.—1st, Jas. Lee and Son; 2nd, John Carver; 3rd, H. W. Seymour; r. and v.h.c., Revd. R. M. Lamb; h.c., Richd. Brown.

Beeswax (not less than 2lb.) Judged for Quality.—1st, John Berry; 2nd, F. W. Frusher, Crowland, Peterboro'; 3rd, F. Harris, Sibsey, Boston, Lincs.; r. and v.h.c., Jas. Lee and Son.

Beeswax (not less than 3lb.) in Marketable Cakes suitable for the Retail Trade.—1st, H. W. Seymour; 2nd, J. Pearman,

Penny Long Lane, Derby; 3rd, Jas. Lee and Son; r. and v.h.c., F. Harris; v.h.c., John Berry and John Carver.

Interesting and Instructive Exhibit of a Practical Nature.—1st, John Carver; 2nd, Jas. Lee and Son; 3rd, H. W. Seymour.

The Silver Challenge Cup of the B.B.K.A. was awarded to Messrs. James Lee and Son.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of September, 1905, was £5,086.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[6050.] With the month of October we should endeavour to complete our final arrangements in the apiary for the year. As early as possible in the month, queen introduction, which ought to have been attended to before, may still be done if the weather is propitious, but it is no use requeening stocks which have been queenless for some time, and which have only old bees left in the hives, as it would mean loss of both queen and colony. Only in superseding queens can introduction be advised in October; if stocks are queenless it is far better to unite the bees to another stock.

Honey Jars.—Friend Loveday (page 364) refers to the well-made clear glass honey jars of a quarter of a century ago, and the writer of 6039 complains of his (still dear ones) cracking both before and after filling. I myself do not regret the change in price from 30s. to 15s., and, although it may be somewhat unpatriotic in some folks' estimation to prefer the cheaper (perhaps foreign) make of jars, I do contend that the change in price has benefited the consumer and also the producer of honey.

I can give no reason for jars cracking, except the changes of temperature. I always wash the jars in cold water and invert in sieves, which are placed in the sunshine; only in a few instances have we to wipe with a cloth, and very rarely do we get a cracked jar. I should think your correspondent "Glass" must have used rather too warm a bath for his jars when washing, then cold water for rinsing, and the contraction caused so many to crack.

I do not think the theory of earwigs emptying combs full of honey will bear investigation. I have had in some seasons quite a number of these insects in my hives (I have not been troubled with them this year), but have never found that they were detrimental or destructive to either bees or honey. I always considered that they merely sought the shelter of the hives for warmth in preference to lodging on the cold ground. Probably in your correspondent's case the combs were never filled with honey, or if filled, were first cleared out by robbers as suggested, and then the earwigs took up their quarters in the empty cells.

Swallows and Bees.—In my opinion, the swallow is a "bee eater." I have not allowed them to build under the eaves of my house for several years, and I believe their absence has tended towards a better temper amongst the bees. It is rare for anyone to get a sting, although I keep a hundred hives by the roadside, with people passing at all hours of the day. I have watched the swallows many times years ago, and have seen bees returning home laden disappear as the swallow swept past, as I still believe, down the throat of the bird. The sparrows are most voracious after drones during the season. I have repeatedly seen them pick up a drone from the alighting boards of hives, and, after flying off with it, come back again in a very short time for another.

A reader writes asking for further information as to smoker fuel. Put ½ oz. saltpetre in a quart of warm water; after it is dissolved, dip your cotton rags into the solution, wring out, and dry thoroughly. This fuel will burn till all is consumed. Another plan is to sprinkle a pinch of powdered nitre on the piece of rag, then roll up and light. This answers very well, but I prefer the former method. Brown paper may be treated the same, and when dried gives forth volumes of smoke. I have never found the nitrous smoke injurious to bees in any way.—W. WOODLEY, Beedon, Newbury.

FIXING FOUNDATION IN FRAMES.

[6051.] The operation of fixing foundation in saw-cut of frames having been a source of continual trouble to me up to this year, I have taken a practical interest in the different methods suggested lately in the B.B.J. (pages 285, 292, and 303), and having read these letters, I think it may be useful to describe a method I have adopted which is an easy and very expeditious plan, differing somewhat from those already described. I enclose a rough

sketch of my method, which, if deemed sufficiently correct, may help uninitiated beginners, who experience the same difficulties as I have had to contend with myself. By this method, half-a-dozen frames can be fitted in one minute, and several hundreds in an hour. No movable wedge or nail is required to keep the frame steady whilst fixing foundation. First cut a board rather longer than top-bar of

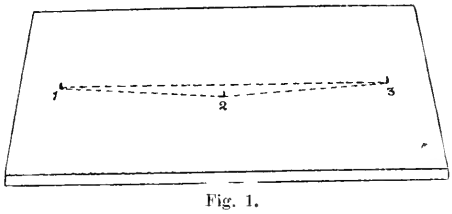


Fig. 1.

frame, and six or more inches wide. In the middle of this drive three oval wire-nails, so that they protrude about half an inch in the following way:—Two are put on a straight line at a distance of $13\frac{3}{8}$ inches apart, so that they enter the saw-cut of frames just at the corner where the side-bars meet with the top-bars. The third nail is driven in at an equal distance between the two first and a little less than a quarter of an inch from the straight line. The frame is pushed down on these three nails by a semi-circular movement, in the order given in Nos. 1, 2, and 3 (Fig. 1), and the nails keep the frame firm and upright (as in Fig. 2), whilst the saw-cut remains open, thus leaving both hands free to insert the sheet of foundation. When the latter has been inserted into a sufficient number of frames, a hot iron is passed over

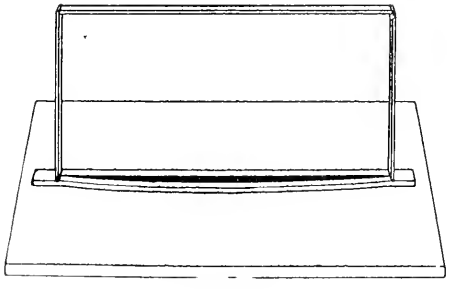


Fig. 2.

the saw-cut on upper side of top-bar, and this causes the wax to adhere to the frame and leaves the sheet of foundation quite firm and secure.

Our harvest has been good here, while the honey is of a uniform good colour and quality, and of very thick consistency. The Carniolan bees especially have given a good account of themselves. — D. Maurus, Devon.

RAISING QUEENS AND INCREASE.

[6052.] Replying to your correspondent "Togo" (3913, page 397), whose *nom de plume*, by the way, makes one feel somewhat shy of him, asks a question on small frames. I fell into making this size by cutting top and bottom bars of shallow-frames in halves (the latter, of course, had to be again reduced), and making a double quantity of side-bars, but if I were going to start again, I daresay I should modify these sizes for sundry conveniences. Discoloured or badly filled sections could be carefully transferred to such use, or to take a standard size brood-comb and cut it into six, would make a sufficient number to fill two of these little "hives" for the purpose of hatching and raising queens. I may say no maker stocks such hives or frames, but they are readily obtained from any saw-mill, by getting a few feet of yellow pine sawn $\frac{7}{8}$in. by $\frac{1}{4}$in., and cutting off in lengths to suit yourself.

My main reason for writing on page 377 was to demonstrate that it is not necessary to interfere with stocks being run for honey in order to obtain genuine increase, and also that it is a great waste of valuable queens to throw away a number of good ripe queen-cells, simply because we have not, or cannot spare, two or even one standard frame of bees to make a respectable-sized nucleus. If you will spare me the space, I will, as briefly as possible, give the method which I have adopted for years of raising good queens at a minimum of loss to the general apiary. As soon as I find a stock preparing to swarm, I examine and cut out all signs of queen-cells, putting in a frame of newly-hatched eggs (laid in a new comb by preference), from the best queen in the apiary, and if this comb is cut along the middle and "dog-toothed," so much the better.

At the same operation, I remove queen for a few days, and have never failed to get a good number of full-sized queen-cells a few days after these cells are capped over by the bees. I prepare the tiny hives by putting a few bees (about half-a-pint), in each and placing them in garden some distance away so as to avoid bees coming back to their old home. They are at the same time given a little food and a small patch of brood from one of the stocks, and two days afterwards the queen-cell.

A week after all this has been done I find all the queens hatched and getting strong on the wing, and in due time are mated and begin to lay; then, after laying about a week, I remove them to permanent stocks or to larger nucleus to form stocks, and insert another lot of cells.

I have not given my plan in detail, fearing you have not room, but should your readers appear at all interested, I will write an article dealing with the matter, and

possibly during the winter months a useful discussion might ensue.—AMATEUR, Bristol.

[We will be very pleased to afford space for the promised article.—EDS.]

A SEPTEMBER SWARM.

[6053.] I thought the following incident would be of interest to our readers:—On passing through my apiary on the afternoon of September 4, I was much surprised to see a swarm issuing from one of my straw hives. They settled nicely on a tomato support, and were left clustered thereon while I examined the skep in which they had been living. It was deserted by every bee, but it contained some beautiful white comb and sealed honey, also some eggs and capped worker-brood in normal condition and perfectly healthy. I joined the swarm to a stock in a frame-hive, and captured a splendid queen during uniting operations. The swarm in question was a June-cast of this year. I cannot think of any reason why the bees left the hive. There was no wax-moth in the comb. I might add that we have had what is known as "hunger swarms" before, and I also remember one of my well-provisioned hives swarmed on a very mild day in February. On that occasion the bees settled in one thick row along a fence, and then returned to their hive minus the queen. This hive contained one of my best queens in the autumn. My hives are very busy just now on the ivy flowers. On Sunday last the merry hum of the bees brought our thoughts back to spring-time.—W. ALLEN, Oundle, October 9.

BEE ENEMIES IN SOUTH AFRICA.

[6054.] I notice your foot-note on page 325, in reply to J. W. H. Kelting, of Pretoria, respecting the bird which he calls the "mountain swallow." Unfortunately he gives no description of the bird, but I should guess it is what we call "the bee funger" (Dutch), or in English, "bee eater." This bird in body is something like the English blackbird, with the exception of the head, which is not yellow; it also has a forked tail, and has no song. The only remedy that I know of is to shoot it; anyway, that is what I did at Bog Farm. I found the "bee pirate" a much more formidable enemy of the bees than the bird in question, but am glad to say I have never seen a "pirate" here, and only a very few birds. We have, however, had a big flood in this district, which has done a lot of damage to life and property, the river overflowing its banks and carrying away all in its wake. We have not lost much stock, but have many acres of cotton, lucerne, and garden crops swept away. The bees, being on a raised position, luckily escaped, but we are pestered with the native robbers, who steal the comb honey and brood to make honey beer. One native has been doing a month for breaking open five hives of ours. It is not only the loss of combs, but the loss of the bees also, which desert the hives after they have been disturbed. Some of our bee-keepers have been fortunate this winter in getting a large quantity of sections of heather honey; this in mid-winter will appear strange to English bee-keepers. I am giving a lecture, illustrated with the lantern slides you sent out, at the Port Elizabeth Institute, and hope to get a good audience. Things are very bad here at the present time, and from what I can see, will be so for some time to come.—J. MARTIN, Wagon Drift Farm, Perseverance Siding, S. Africa, September 29.

P.S.—We have left Bog Farm, which has been sold for a township.

THE BEE-SEASON IN OXON.

[6055.] In fulfilment of my promise to send a report of the bee-season here, I may say that, on the whole, it has been a disappointing one in this neighbourhood. The early summer promised well, honey-yielding flowers blooming in rich profusion, while the weather appeared most favourable, but for some cause the honey-flow was very short. I work mostly for sections, and like to exhibit, but from twelve hives I did not have half a dozen fit for showing. I had no difficulty in getting them sealed over. Extracted honey was very good, and there was an entire absence of honey-dew this year, though I am seldom troubled with that pest in my apiary at any time. My average "take" was only 23 lb. per hive, against 55 lb. in 1904, which year, by the by, was the best I ever had. My hives are all well supplied with stores for winter, and last week had a considerable amount of brood on several frames, so hope to start well next spring, as nearly all my stocks are headed by a young queen.

I have under my charge several stocks in the neighbourhood, some of which have done well and some very badly. It has been a season of excessive swarming with us, as the honey-flow did not start until the end of June. Several of my first swarms issued on very cold days, and nothing one could do seemed effectually to stop the swarming fever, once it started, except destroying the queen and returning swarm, which I did several times. I first tried cutting out all queen-cells and giving extra supers, but still the bees swarmed. Owing, no doubt, to the cold weather, I never got stung so much in hiving swarms as this year, though none of mine settled in awkward places. Wishing all bee-keepers success for 1906.—MID-OXON, October 3.

"A RE-START WITH BEES."

[6056.] Having seen the request made by your correspondent, "Cymru," in last week's B.B.J. (page 396), in a letter headed as above, I beg to say that some time this month I am going to live in Old Colwyn, and am taking my bees with me. I am a member of the Derbyshire B.K.A. I have within the last two months been visiting several parts of North Wales, but only once did I see bees, and then only two or three hives.

I shall be pleased to hear from "Cymru." As he appears to be a Lancashire man he will probably be interested to know that we belong to the Bolton Ashworths (*not* John Ashworth, of "Strange Tales"). Perhaps our Editors will kindly put me in communication with "Cymru."—M. E. A., Chaddesden, Derby, October 7.

[We will draw the attention of "Cymru" to the above and forward name and address to "M. E. A." if same is sent to this office. —EDS.]

THE SALE OF HONEY.

[6057.] Some time ago I related the fact of my having been cut out of a certain market by some bee-keepers who offered their honey at the absurd price of 45s. per cwt. These bee-keepers did themselves but little good. They could just as easily get 58s. per cwt., if they had held out for it. I have sold out at my own price.

A bee-keeper of my acquaintance got 60s., and the tins to pack it in were supplied to him at that; he paid half the carriage.

Honey retails easily in towns at 1s. per pound; consequently, those who offer at 45s. per cwt. are simply acting foolishly, and the worst of it is they sometimes ruin the market for others. 58s. to 60s. should, in my opinion, be the price, and on no account should less than 56s. be accepted. Real good honey will always fetch 60s. My own particular lot of the best was so good quality that I would rather give it away than let anyone have it for 45s. or 50s. My advice is hold your honey over till you get your price.—BUSINESS, Cornwall.

[We are fully in accord with our correspondent with regard to fair prices, and in deprecating the habit of "selling at any price"; but it is, to say the least, misleading to say that "honey retails easily in towns at 1s. per pound." If Mr. Farmer's experience of honey-selling is even moderately large, he will find that in most large towns good honey can be had in 1-lb. jars at 1s. each and less, and not only so, but this includes the price of the screw-cap jar in which it is sold. In London, we see at the Civil Service Stores, to-day, good 1-lb. sections for sale at 9d. each.—EDS.]

PREVENTING SWARMING.

[6058.] Your correspondent, Mr. Geo. S. Faunch, in his "Echo from the Hives" (page 389 of B.B.J. for September 28), says: —"I have not had a single swarm during the six years I have kept bees." It would be of much interest if Mr. Faunch would tell us in your columns how he manages to keep his bees from swarming. I, for one, would be exceedingly glad to know how to do it.—W. C. H., South Devon, October 4.

GETTING RID OF WAX-MOTH.

[6059.] I imported an enormous lot of wax-moths in some skeps, and they caused much trouble for a year or so. By destroying the maggots and moths whenever seen, keeping the bees strong, and using impervious quilts next the bees, I have got rid of them. Cloth quilts seem to harbour moths, and the larvæ bore through them into the hive. I use quilts made of the material used for floor-coverings, the lightest kind, with unpainted back. I find it best to use it in strips about 5 in. wide, so that I am not obliged to uncover all the frames when examining the bees.—W. J. FARMER, Redruth.

HOW TO FIND A MARKET FOR HONEY.

AN EXPERT'S ADVICE.

[6060.] Hope Cottage stood on the side of the main road leading to Okehampton, Exeter, and continuing right on to the great Metropolis. It was a cosy little dwelling, with garden, orchard, and some agricultural land. A brick-paved pathway led to the cottage porch, which latter, at the time of my visit, contained some very fine auriculas in flower. At the time of arriving to pay my visit as expert to our county B.K.A. a clergyman was about to leave, with whom I exchanged some compliments, and a pleasant word or two. I was soon recognised by the good lady of the house as a visitor who had called before to see the bees, and a boy was despatched to the field to "tell master he was wanted." The master soon arrived, and we were at once engrossed in a talk about the bees, as we walked into the garden to see them. The hives were strong, and quite ready for supers, which were promised to be obtained and put on without delay. After a few hints and suggestions our conversation turned on the vexed question of finding a market for honey. I was informed there was no difficulty in disposing of the honey crop at "Hope Cottage," not that the bees

there were better than any others, or that there was better forage-ground, yet the honey from those hives commanded a ready sale, and a fair price. The reason was not far to seek. The honey was fresh-looking, put up in scrupulously-clean jars, wholesome in appearance, and appetising. How is it some bee-keepers loudly complain that they cannot find a sale for their honey?

Just here we have an open secret. Digestion begins before the food enters the mouth; when the eye lights upon anything that is nice-looking a desire is created; the presence of appetising food will cause the gastric juice involuntarily to flow; the sight of luscious bunches of grapes will set the salivary glands to work, or as we sometimes say, the mouth waters, and quite naturally we endeavour to obtain that which we desire. A purchase is made; we have allowed ourselves to be led into a temptation—which is quite pardonable. I therefore say to those who complain of not finding a market, take a hint from these few notes of an expert's visit to "Hope Cottage."—J. B., Polyphant, Launceston, September 22.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
September, 1905.

Rainfall, 2·41 in.	Minimum on grass, 36° on 16th.
Heaviest fall, ·64 on 9th.	Frosty nights, 0.
Rain fell on 17 days.	Mean maximum, 62·7.
Above average, ·12 in.	Mean minimum, 49·6.
Sunshine, 111·7 hours.	Mean temperature, 56·1.
Brightest day, 15th, 11 hours.	Above average, 0·8.
Sunless days, 4.	Maximum barometer, 30·37 on 17th.
Below average, 68·2 hours.	Minimum barometer, 29·63 on 7th.
Maximum temperature, 73° on 3rd.	
Minimum temperature, 40° on 13th and 16th.	

L. B. BIRKETT.

REVIEW.

The Honey-Money Stories, by Paul Point and others. Published by G. W. York and Co., Chicago, U.S.A., price 25 cents.—This is an 8vo. pamphlet of 64 pages, and contains a variety of short stories, interspersed with facts and interesting matter about honey. On the title page we are told "Eating Honey Improves Health," consequently, "Better Health Increases Wealth." "This book is not on money from honey, but is about pure honey for your plate and money for your purse." The subject matter is in popular style, calculated to attract the attention of the honey consumer, to stimulate a desire for honey in those who have never eaten it, and for more by those who are already good judges of this delicious and wholesome sweet. The pamphlet is beautifully executed, and there are thirty-one half-tone illustrations of apiaries and apiarian scenes. There are valuable items by Dr. C. C. Miller, and also three bee-songs. The main object of the pamphlet is to interest people in honey as an article of daily use in the household.

Queries and Replies.

[3921.] *Dealing with Suspected Stocks:*—I should be much obliged if you would advise me on the following points:—I started bee-keeping by purchasing two second hand hives in good condition, which had not been used for about six years. I obtained a stock of bees early in August last, and by liberal feeding I worked this up to ten combs by end of September. I also obtained another stock on six combs, which were fed liberally for two or three weeks. At the end of September I packed both hives for winter, and as No. 1 contained a large amount of stores (having had about 30lbs. of sugar), I took out two combs of sealed food, substituting dummy boards in the place, and packed up with cotton wool and sacking. On examining No. 2 hive, I found compact patches of brood on four of the six combs, and a moderate amount of stores, so I exchanged an empty comb for a full one, from No. 1. I also gave to each a 2lb. cake of medicated candy. On reaching home—some distance away—I looked over the other combs taken from the hives, and found about a dozen sealed cells of brood dotted about the comb taken from No. 2, containing pupæ in various stages of development, but two cells, on being opened, were found to contain a light brown syrupy substance, which emitted a bad stench. This I took to be proof of foul brood, and so I pitched the comb into the fire! The points I want advice on are (1) In view of the weakness of No. 2 stock, and the light hives used, is it advisable to give some further protection from the weather? (2) As the hives are now about half-a-mile apart, would it be advisable to bring them together and place both in a piano case with a projecting flight board in front of each, or would this be risking the infection of No. 1, supposing No. 2 to be diseased? (3) As all the syrup used for feeding was medicated, as recommended in the "Guide Book," I suppose it is now too late to do anything more with the foul brood until next spring? (4) Even if No. 1 hive is infected, do you think it likely

to develop after having been fed so liberally with medicated food?—W. E. B., Manchester.

REPLY.—1 and 2. If you will send us a cell or two from the suspected combs of No. 2 hive, will be able to advise as regards bringing the two hives together as proposed. Your inexperience of foul brood makes it unsafe for us to say more. 3. Yes, the season for dealing with diseased stocks is now over for the year. 4. It is impossible to say.

[3922.] *Bees in House Roof.*—Some bees have this summer made a home in the roof of a house which has a space of about two feet between the eaves and the upper windows. The bees' entrance is a small hole just where the roof and wall meet, and being so near the windows, they are extremely troublesome though entering the house when the windows are open. Would you be so kind as to advise, in the BRITISH BEE JOURNAL, how the bees may be destroyed without disturbing the roof? Plastering up seems cruel, and I do not know how to blow in sulphur smoke. A line in reply will oblige— A LADY BEE-KEEPER, Newton Abbot.

REPLY.—Unless it is possible to get so near the bees as to be able to pour a small quantity of cyanide of potassium down among them, or else place a rag saturated with the liquid below the combs, we fear there is no alternative to stopping up the entrance-hole and leaving the bees to their fate. If the help of an experienced bee-man can be had, he might be able to see some other plan of ridding you of the trouble after inspecting the place; it is difficult to suggest a remedy without that advantage.

[3923.] *Diverse Markings of Hybrid Bees.*—I shall esteem it a favour if you will inform me if hybrid Italian bees from the same stock are often so diverse in the markings as are the two enclosed? I may say there is no doubt that the specimens are bred from the same queen. The stock is very strong, and is made up of about equal numbers marked like those sent. All through the breeding season I have noticed this dissimilarity.—J. W. L., Keswick, October 7.

REPLY.—Bees vary and change in the distinctness of colour marking even during lifetime, owing to the pubescence, or hairiness, wearing off more or less as time passes. Old hybrid bees become very different in colour compared with their appearance when young. This is especially the case with the progeny of queens mated with drones of a different variety. The same thing occurs with human beings, where we not unfrequently see children of the same parents some with black and others with red hair.

[3924.] *Tits and Bees.*—Will you please tell me in BRITISH BEE JOURNAL the best way of guarding against the mischief done by tits? They play havoc in catching bees at the hive entrances in the early part of the year. What do you think of having some form of netting tacked over the front of porches for a couple of months when the birds are so troublesome in the way mentioned. I do not like shooting them. A line of reply will oblige.—(Rev.) GEO. JARVIS, Glos.

REPLY.—There is no better remedy (apart from shooting the birds), than the one you mention.

[3925.] *Uniting Bees in September.*—I have been uniting a colony of driven bees to a stock in a frame-hive, and the result was a great slaughter. I drove the bees in question from their own skep quietly and successfully into an empty one, according to the directions given in "Guide Book," which directions I also followed an hour later by throwing the driven bees down upon a white cloth in front of the frame-hive, previously shaking off a few bees to lead the way. Many went quietly in, but others buzzed round me until I was covered with them. This being so, I ask:—1. Is it necessary to smoke the bees in order to subdue them before throwing them down in front of the frame-hive? 2. Is it better to use flour than thin scented syrup when uniting? I did my best to dress them over with the syrup, but, probably being clustered together, it might not be so effective. Perhaps I should explain that the driven bees were run into the frame-hive at midday on a warm morning when the sun shone brightly. 3. Do you think the fighting and slaughter were due to the return of the flying bees of the frame-hive that did not get sprayed with the scented syrup? Being only a novice your replies will be valued by —W., Derbyshire, October 4.

Later.—I wrote a few days ago stating my difficulties in hiving some driven bees. In the operation described I used thin syrup scented with pepperment. Since then I hived a second lot, but this time dusted the bees with flour, and used a little smoke. The result was very much better—indeed, with the exception of a few young bees rushing out of the hive there has been no fighting at all, and I conclude that the fighting was caused by robbers in the first case owing to the use of syrup.

I only commenced bee-keeping last July with a stock in a skep which cost me 10s. I drove the bees, and put them in a new "W. B. C." hive, transferred the comb as per "Guide Book," about a week later united to them a small swarm, and this week have added the bees from two skeps.

I could not find the queen in these two skeps, and there was no brood.

I am much interested in the B.B.J., and, being fascinated with the work of bee-keeping, may probably trouble you with my difficulties as time progresses.—W., Derbyshire, October 7.

REPLY.—1. A puff or two of smoke is needed to quieten the bees, but when they have been dusted with flour no further intimidant is required. 2. A great deal better; in fact, the use of scented syrup is nearly a thing of the past. 3. It is certain that the syrup largely helped to create the trouble.

[3926.] *Starting Bee-keeping.*—I started bee-keeping this year with two 6 lb. swarms, which I got in June, and have since secured 42 lb. of honey from them. On examining the hive before packing all down for winter, I found very little brood in the combs, all of them being like sample sent. I may say I have never seen ordinary healthy brood in normal condition, and that is why I am asking for your opinion whether there is foul brood in comb sent. Thanking you in advance for reply.—N. A. W., Renfrewshire, October 4.

REPLY.—Comb sent contains nothing worse than honey and pollen; no disease at all.

[3927.] *Uniting Weak Stocks in October.*—1. Will you kindly tell me in next week's B.B.J. if it is too late in the season to unite bees? I have three weak stocks which I should like to make into one, or perhaps two. They are in frame-hives standing about 3 ft. apart. Should I have to gradually move the hives together? 2. Will you also tell me how to feed a stock of bees in skep, having no feed-hole at top, and only 1½ in. entrance? Could I transfer them to frame-hive, or would they be better left where they are till spring? The skep stands some 50 ft. away from my other hives. Name enclosed.—HEATHER, Sidmouth, October 8.

REPLY.—1. If united, after drawing the three stocks a little nearer together on a fine day, it will be quite an easy task, and no harm will follow. 2. Cut a feed-hole in crown of skep and give a bottle of warm syrup at once, then insert a cake of soft candy in hole, and cover up warmly to keep bees from getting at the food from outside.

[3928.] *Italian Honey.*—I send you herewith a sample of honey I brought back with me recently from Lake Gurda, Italy. It may interest you to taste it, and I should like to know the source from which it has been gathered if you are familiar with it? Do you think the peculiar aromatic flavour is attributable to the flowers of the wild mint, or peppermint? Reply will oblige.—D. L. B., Cheshire.

REPLY.—The honey received is from sources with which we are entirely unacquainted, but there is nothing to remind us of that from peppermint. In fact, the aroma and peculiar flavour is largely owing to fermentation having started in your sample.

[3929.] *Candy for Winter Stores.*—Having two hives of bees located some thirty miles away from here, at a place I shall be living all next year, I am anxious to give them a good-sized cake of candy each without delay. At the end of August both stocks were well stored with honey in body boxes, but the bees have not been fed since. Would it be safe to fill, say, ten sections with candy and place these in a rack made to hold that number, and cover up specially warm, or would you advise me to give the same weight of candy in one cake? It might be cast in a large basin and put on top-bars directly over the cluster. Your reply will be esteemed by—W. G. R., Yorks, October 9.

REPLY.—We advise you to give each stock a cake of well-made soft candy, weighing about 4 lb. Mould it in a large deep saucer, with a sheet of paper below, so that it can be placed directly over the cluster of bees, and snugly covered by warm quilts, well tucked down at the edges, to retain the warmth. Or, better still, use the "St. Beuno device" for candy-feeding, described in B.B.J. of October 2, 1902. By this means a 6-lb. cake could be given, and this would last the bees for a long time.

[3930.] *Requeening Stocks.*—I have two old strong stocks in frame-hives, which have yielded no honey this season, so I killed the queen of each and introduced young ones, which were accepted. On examining the combs, I found seven or eight uncapped or empty queen-cells in each hive, apparently new, and so I ask:—1. If swarms have issued from above, have I done done right in requeening? 2. Is the enclosed bee a queen? I found it dead outside a driven lot I had last week.—HORNET, Hinckley, October 3.

REPLY.—1. There would be no need for requeening the stock if they had swarmed and the young queens been safely mated. In your case, however, it is safe to say the stocks were queenless, or the alien queens would not have been accepted. 2. The bee sent is a worker.

[3931.] *Feeding up Driven Bees.*—I shall be greatly obliged if you will kindly give me a little advice in B.B.J. I have purchased 4 lb. of driven bees with queen, and put them in a frame-hive. Then I bought 20 lb. of sugar, made it into syrup, and fed up rapidly. 1. Have I given enough to last the bees through winter and spring following? 2. Is there a B.K.A. in Bedfordshire, and, if so, could you tell me

name of secretary? I find that advice given in your journal to others often serves as replies to queries I have been about to ask. I enclose card and sign—AMATEUR, Beds.

REPLY.—1. If the food mentioned has been given within the last week or two, it will be sufficient to carry the stock over winter, but it might be well to give a 2-lb. cake of soft candy to make the stores quite safe.

Bee Shows to Come.

October 12 to 21 in Waverley Market Edinburgh.—Honey Show, in connection with the Ninth Annual Edinburgh and Midlothian Industrial Exhibition. For particulars apply A. T. Hutchinson, 35, Leith Street, Edinburgh.

October 19 and 20, at Kilmarnock, N.B.—Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries closed.**

November 5 to 18, at Plymouth. — Annual Show of the Devon B.K.A., in conjunction with the Plymouth Exhibition. Twelve classes, with good prizes, for honey and bee appliances, including special prize of £1 1s., for two 1-lb. sections. Schedules from F. W. Palmer, Turner Cottage, St. Badeaux, Devonport. **Entries close November 1.**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances, Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries close November 1.**

Notices to Correspondents & Inquirers.

W. F. M. (St. Leonards).—Contracting Entrances in Winter.—There is no "correct width" for hive entrances in winter, as much depends on the strength of the colony, exposed location, etc. A strong stock may have an entrance six inches wide all winter, while less than one inch is sufficient for a weak lot. Again, if the hive-front is exposed to cold, biting winds a very narrow entrance is best, but if in a warm, sheltered spot, a wide one is advantageous.

B. W. (Dunmow).—Chemical Tests for Analysing Sugar.—We regret our inability to describe the process followed by professional analysts in arriving at their conclusions, and therefore cannot assist you in distinguishing the difference between various sugars.

P. MARTORELL (Exmouth).—Sugar for Bee-food.—1. The cube sugar you name is, we believe, not guaranteed pure cane. If No. 2 sample is guaranteed to be cane sugar, it must be accepted as such, for the guarantee could only be disproved by analysis, and this, of course, we cannot undertake. 2. The ordinary native bee cannot gather from red clover, and it is an exploded fable to assert that some of the foreign varieties of hive bees can do more than the native.

IRIS APIARY (Workington).—Candy Making.—Your sample is not quite boiled enough to make it smooth and "buttery" in grain; otherwise it is a good candy. We will be glad to have your views on "cell-formation" when worked out, but advise a perusal of the chapter in Mr. Cowan's work, "The Honey Bee," before your views appear in print.

W. TOMKINS (Essex).—Bees in Cheese-box.—You may make a fairly good guess with regard to the weight of stores for winter by lifting the cheese-box from its floor, and if the gross weight approximates 25 lb. to 30 lb., it will be all right so far as regards food. If much lighter than the weight named, a hole should be cut in the top of the box and a good-sized cake of candy be laid over the hole and covered warmly up. It is too late in the year now to transfer the bees from cheese-box to a frame-hive.

Suspected Combs.

MAC. (Kincardine, N.B.).—There is no foul brood in sample; the sealed brood has reached the chrysalid stage, and appears quite normal.

J. P. (Old Hill).—Confirming our brief reply by "wire" to say it was an unmistakable case of foul brood, it is, of course, impossible to judge with any degree of certainty whether the disease was imported with the queen-bee received from Italy or not. On the other hand, the fact that no other of the stocks in the apiary is affected, and that the hive in question was healthy in the spring before the foreign queen was introduced, certainly looks suspicious.

CAUTION (Manchester). — There is foul brood—in decided form—in comb sent; some of it shows in larvæ not long dead, but in a few cells we find disease of old standing, so it is not a recent outbreak as supposed.

Honey Samples.

A FRENCH SUBSCRIBER.—Of your two samples of French honey, No. 1 (H) is by far the better; it is of good consistency and of moderate flavour, while its colour somewhat resembles that from our lime trees, though inferior to the latter in flavour. In the last-named respect it would bear no comparison with the higher grades of honey gathered in this country, nor can we trace its source; but, to our mind, it is more likely to be gathered from tree-blossoms than from flowers. The second sample, No. 2 (V), is an inferior honey, rank and coarse in flavour, and having an unpleasant odour.

**** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONFERENCE OF BEE-KEEPERS.

(*Continued from page* 402.)

The Chairman, speaking in reference to village bee clubs, invited opinions on the subject. He thought they might be a useful adjunct to associated work, but that they should not be made a substitute for it. He then narrated at length the efforts made, with the efficient aid of Mr. Schofield, of Keston, to resuscitate the Kent County Association. Particulars had been obtained of the schoolmasters as to the extent of the bee-keeping industry in their districts, and census of apiculturists secured. The B.B.K.A. had been good enough to supply six or seven hundred copies of Mr. Harris's pamphlet on the advantages of bee-keeping, so that every one of these schoolmasters had had the privilege of reading such advocacy of bee-culture as a hobby, and he had great hopes that much good would come out of it. Personally, he feared that village bee-clubs would have a tendency to take away funds from the associations, and that would be no gain to the cause.

Mr. Geo. Hayes (Notts) advocated local meetings of members of county associations in preference to bee-clubs, which would, in his opinion, damage associations by drawing away people who might otherwise support them. A good local secretary would be glad from time to time to organise these meetings in various centres, which would bring new life into the county association.

Mr. F. B. White (Surrey) said there was a bee-club in Surrey, and attempts had been made to start one or two others; but it was generally felt that these clubs meant a division of the power of the county. The annual subscription to the particular club he referred to was 1s. per member; thus, sixty members' subscriptions only produced £3. This club managed to keep together, but did not help the association. It could not give any expert attention to the bees of members, but held an annual show of honey, etc., and collected funds in the neighbourhood to defray expenses connected with the exhibition mentioned. The club members, in consequence, would not support the countyshow. He was strongly of opinion that clubs made for disunion, and to promote them was to damage the interests of county associations, by which bee-keeping would suffer, especially *modern* bee-keeping.

Mr. Scattergood (Notts) thought the object of bee-clubs was not to teach bee-keeping, but more to promote mutual helpfulness, members lending each other extractors or other appliances, and co-operating towards mutual support; but he quite agreed that these bodies should in no way be allowed to detract from county associations. It was a *sine quâ non* that the latter must be the prime authority in a county, and their influence should not be weakened. He might say that was a village club in himself, for the local cottagers came to him if they wanted foundation, or the use of an extractor, etc.

Mr. Alder (Essex) thought bee-clubs unnecessary where there was a good county secretary, and if they were encouraged the tendency would be to split up county associations. When bee-keepers came to him for help he advised them to join the county B.K.A., and pointed out the advantages of it. In this way he had himself secured nearly a dozen new members at 5s. each, cottagers' subscription being 2s. 6d.

General Sir Stanley Edwardes agreed with Mr. Scattergood as to the value of co-operation among villagers. He thought that by forming village bee clubs the sympathy and support of County Councils would be obtained, because it was well known how they favoured any measures for the benefit of rural populations. Besides that, there was the mutual assistance obtained, such as the acquisition of frame-hives referred to. He did not fear that the clubs in question would derogate from the Associations, but really be a help to them. He would certainly endeavour to raise one in his own neighbourhood.

Mr. Carr said he would not support village bee clubs if they were in any way likely to injure County Associations, but he hoped they could be utilised as adjuncts to the latter, and be useful in recruiting members for the local branches. Every county was not blessed with a secretary like Mr. White, of Surrey, and many secretaries found great difficulty in getting a meeting together. If clubs could be established in villages, and the members met once a month, bee-keeping would be advanced, and additional interest evoked in the cause. He thought there was no denying the benefit that these clubs afforded.

After an interval for refreshments the members re-assembled, when Mr. T. I. Weston took the chair.

Mr. Till said it was of the highest importance that every means should be adopted to encourage the cottager to take up scientific bee-culture, or even to adopt improved methods. Unfortunately, many of their poorer brethren were disinclined to take much trouble. He had himself tried in vain to impress on them the importance of putting up their honey in proper marketable form and for these reasons: he feared it would be a mistake for associations to take on their shoulders other organisations such as bee clubs.

The Rev. R. M. Lamb (Yorks) also spoke of the apathy of working-class bee-keepers,

and Mr. Andrews (Herts) confirmed such statements.

Mr. Pugh (Notts) thought they could only judge by experience in these matters. Many would remember the existence of the Wootton-under-Edge Club, which did valuable work so far as its individual members were concerned, but had never been affiliated nor of any help to the County Association. There were many of these little district associations in Yorks, but they never came together; even Mr. Grimshaw, the county secretary, had not been able to secure that; therefore any assistance they might have rendered the cause was marred by disunion. He agreed with Mr. Hayes that a society might have its subsidiary branches, and considered the need well met by district secretaries calling their members together on Saturday afternoons, by which probably more subscribers would be obtained for the County Associations. A stipulation should be made that if help was required applicants must first join the latter. He was himself distinctly in favour of district associations as being preferable to village bee clubs.

Mr. E. J. Burtt (Glos.) said that the members of the Wootton-under-Edge Club took great interest in one another's bees, and held some good shows among themselves, and they were also affiliated to the Gloucester Association while the latter lasted.

Mr. Pugh recognised that they were a progressive body, but they did not help to build up the County Association.

General Sir Stanley Edwardes was averse to throwing cold water on the efforts of those who would build up village clubs.

The Rev. R. M. Lamb described his efforts in Yorkshire, where he had lectured a good deal on bee-keeping, and was of opinion that it would be better to consolidate the County B.K.A. and its auxiliaries in the form of district associations before encouraging bee clubs.

Another speaker pointed out the danger of spreading foul brood incurred in the indiscriminate lending of extractors and other appliances.

The Chairman, in winding up the discussion on this subject, said he believed the general feeling was that village clubs should be encouraged where there was an active secretary, who would take care that the interests of the County Association should not suffer. In large localities like Yorks, Hants, and Lincs, it could hardly be expected that bee-keepers living in remote parts would be able to attend the meetings of the main body; but he thought those experts who were enthusiastic in their work might start little bee clubs of their own where they could influence the villagers as opportunity offered. In such cases no machinery at all would be required. Then, if the experts would attend the meetings of the County Associations, and let the members know the state of things going on in distant parts of the county and what the villagers were doing, the whole body of bee-keepers of each shire would be kept in touch, and their needs and necessities made known.

The second item on the agenda was "The Unequal Sizes of Sections," the discussion of which was initiated by Mr. W. F. Reid, who said that many bee-keepers complained of the disadvantage of sections of different widths, which would not fit the appliances made to hold them. Some sections were 2 in. wide, while others, reputed to be 1 15-16ths, were really only $1\frac{7}{8}$ths. That meant $\frac{1}{8}$th inch less in the width of the section; consequently, if worked in a rack made for the narrow ones, and seven 2 in. sections in one row (the usual number) were attempted to be put in there would be $\frac{7}{8}$ths discrepancy. Any bee-keeper ordering of an appliance-maker a gross of sections did not know what he would get, and might probably find that, though of perfect quality, they would not fit easily into his rack. Another disadvantage was that in packing the measurements of one would not suit the measurements for the other. He wished to elicit the feeling of bee-keepers present, who had large experience in such matters, as to which size was the most desirable, namely, the full 2 in. or the newer sample 1 15-16th, which often was $1\frac{7}{8}$ in. He knew that the smaller sized section was supposed to be an advantage, because it contained less honey, and producers thought they were making a little more money on their sales; but that was quite illusory. If once the public found that smaller sections than they were entitled to were being palmed off upon them the honey trade would fall into disrepute. No doubt the old sections when well filled contained a good deal more than 1 lb. of honey, but the average weight was very slightly above that. The difficulty was that the bee-keeper here seemed to be under the thumb of the American manufacturer; but if the British bee-keeper was to put his foot down firmly and decided on the size of section required, the American firms concerned would gladly yield to our wish. It would also assist appliance-makers very much indeed if bee-keepers would fix on a uniform size; as it was, dealers here were obliged to stock two or more sizes in order to meet the wishes of all customers.

The Rev. R. M. Lamb advocated freedom of action in this matter. When first the railway was adopted many other interests suffered; but that was no reason for resisting improvements. Let them try all sizes, and let a committee of experts be appointed to decide which was best. No doubt any change suggested had a cer-

tain amount of common sense to recommend it. A few years ago prizes were offered for tall sections, but that was no longer continued. He was opposed to any action that might hamper improvements.

Mr. Reid did not propose to stop modification or improvements, but only suggested that there should be one size for sections instead of two. The first railway referred to by Mr. Lamb did not have two gauges on the same line.

Mr. Scattergood thought the position taken up by Mr. Reid very clear. He only proposed that the meeting should recommend one *width* of sections without dogmatising what the size should be. Even if a uniform size was adopted bee-keepers desiring different sizes would always be at liberty to use them. Personally, he was inclined to think that the 2-in. section could not be bettered.

Another speaker pointed out that it was very difficult to lay down any rule where pounds, shillings, and pence were involved; and if the narrower sections secured the same price as the 2-in. ones, any standard adopted would probably not be adhered to.

Mr. W. Boxwell said that, as agent for the A. I. Root Co., he, of course, imported a considerable number of sections from America. The narrow size, 1 15-16th, was the widest section made in that country, $1\frac{7}{8}$th being the size in general use. He thought the Americans were quite willing to make 2-in. sections to order, and they would be no doubt pleased if the demand were for one size only. The question lay entirely with bee-keepers themselves. The 2-in. section, if full, was more than 1lb. in weight; indeed, the 1 15-16th size, if well filled, weighed more than 16 oz.; therefore, he asked, why should the bee-keeper lose the value of the little difference? No doubt the majority of their brethren would be influenced a great deal in this matter by the opinions of their leaders. It had been said that judging was sometimes rendered difficult by the fact of two sizes being used. That was another reason why one size should be decided on.

In answer to the Chairman, Mr. Boxwell said that the $1\frac{7}{8}$th size was mostly used in the United States; and, in reply to Mr. Carr, he gave his opinion that the demand in this country for each size was about equal, although orders for the 1 15-16th were steadily increasing.

Mr. Stoneham thought it a great pity there should be any variation in the sizes. Strong reasons existed in favour of a standard, and, if decided on, it should be adopted by all, unless good proof could be afforded that it was a wrong one.

The Chairman said that in ordering sections it was almost impossible to make sure that one obtained a uniform size throughout, because the difference between 1 15-16th and 2 in. was too small to be detected by a mere glance, and it was only when fitting them into the rack that the discrepancy was discovered. He hoped the meeting would come to a decision on the question. Personally, he preferred the 2-in. sections, which best suited present appliances, but it was a matter that belonged to the large honey-producers to decide.

Mr. Till agreed, and proposed that the standard section for this country should be $4\frac{1}{4}$ in. by $4\frac{1}{4}$ in. by 2 in. He believed that if such resolution were carried there would be no difficulty in always getting it.

Mr. Andrews seconded the motion.

General Sir Stanley Edwardes said that they had a standard frame, and, therefore, why not a standard section? The curse of England was the non-standardisation of many productions; and he hoped the B.B.K.A. would give its *imprimatur* to one size, when everybody, no doubt, would fall in line.

Mr. Wm. Herrod pointed out that the price of sections had increased, while that of honey had decreased considerably; therefore, if bee-keepers could make the value of 1-16th or more on each section, that was a matter worthy of consideration. He had seen Canadian sections weighing not more than $\frac{3}{4}$ lb. sold in this country for the same price as was given for English full-sized sections. He was certainly against the alteration of appliances; but he thought the difficulty of the section-rack could be surmounted by thickening the following-board. Of course, sections of mixed sizes would not fit.

Mr. Reid was aware that British sections were larger in quantity and better in quality than foreign ones. He did not, however, think the present meeting at all competent to definitely fix the size, but merely to express an opinion.

Mr. Carr asked how, even if a standard were fixed, they would be able to compel producers to adopt that standard? If a slightly smaller section was growing in popularity, whatever the B.B.K.A. might do, they could not prevent it. The largest honey-producers would, in the end, decide the question by giving their orders for the goods they required.

Mr. Boxwell said Mr. Wm. Woodley, who formerly used only the 2-in. section, had tried the 1 15-16th section, and would now have no other.

The resolution, in the following form, "That it is desirable, in the opinion of this meeting, that there should be a standard section recognised by the B.B.K.A., namely, $4\frac{1}{4}$ in. by $4\frac{1}{4}$ in. by 2 in.," was submitted to the meeting, and carried by a majority of seven.

(*Conclusion of Report next week.*)

THE DAIRY SHOW.

As mentioned in our report of prize list in last week's issue, there was a slight increase in the number of entries compared with 1904, but the quality of the exhibits showed a considerable improvement on the previous year's show. This was of course due to the present excellent honey-season in many counties.

Light-coloured extracted honey was very well represented both in number and quality, the winning exhibits being especially good, and it is not too much to say that the v.h.c. samples all deserved prizes along with the actual winners, so close was the competition.

The "medium" class was also good, but several of the best samples were perforce passed over because of containing heather honey, which latter is clearly disallowed by the schedule. There was probably less of heather mixture staged in the dark-honey class than in the one above, but it would be well if all exhibitors of liquid honey would provide themselves with colour-grading glasses in order to avoid staging exhibits in the wrong class; by so doing they incur the costs of entry, carriage to and from the show, and all to no purpose, for the judges cannot disregard their instructions, and have no option when disqualifying exhibits in fault.

The class for heather honey, though a small one, had the merit of containing samples of genuine "ling" honey—i.e., from *Calluna vulgaris*. There were a few samples from *Erica cinerea*—thin, dark-coloured, and liquid as usual—but they of course stood no chance with honey that will not run from the jar when turned upside down.

Sections were well to the fore, and some capital samples were staged, but one of the very best lots was put out of the running by the condition in which the sections were shown, every one of the whole dozen leaking badly and in unfit condition for the show-bench. Of the six entries in the trophy class five capital exhibits were staged, each of which received notice from the judges, but some exhibitors went a bit beyond the schedule, which simply says, "Best display of comb and extracted honey," without mentioning decorations, etc. Both the wax classes were well represented, most of the exhibits being of very high quality indeed.

The first prize in the final class for interesting and instructive exhibits was given to a very capital little appliance for glassing and papering sections, one of the most useful things we have seen for a long time. The second went to a carefully prepared exhibit of bee-enemies, showing well-preserved specimens of the best-known and most troublesome things—birds, toads, wax-moth, *Braula coeca*, etc., neatly arranged in instructive form.

Obituary.

MR. CHAS. T. ABBOTT.

Mr. Chas. T. Abbott—a brief notice of whose death on the 28th ult. appeared on page 392—was one of three sons of the late Chas. Nash Abbott, well known to readers of the B.B.J. as its first editor. Born at Ealing in 1859, he may be said to have inherited his father's zealous interest in the welfare of the place where he lived for the greater part of his life. When his father removed to Southall, and there established an extensive business in the bee-appliance trade, his sons remained under the parental roof, and took an active part in the work. When Mr. Abbott, sen., retired from the business in 1886 Messrs. Chas. T. and Stephen Abbott carried it on as Abbott Bros. For the past five years, however, the subject of this notice has taken no active part in the management of the business, having for the greater part of his later years devoted himself to parochial affairs and the development of land estates. In this direction, and without any special technical knowledge or training, he has operated in an intricate and difficult business, and met with a more than ordinary amount of good fortune. Perhaps his greatest achievement in this connection was the successful development of the Hambrough Estate, Southall, on which over 2,000 acres of "worked-out" brickfields were transformed into good streets, and many hundreds of dwelling-houses erected. As already said, Mr. Abbott had interested himself and laboured vigorously in local affairs, having for fourteen years served the ratepayers of Southall on the Local Board, of which he was, on two occasions, elected chairman. He, however, was best known at Southall in connection with the Southall-Norwood Fire Brigade, of which he had been the popular captain since its formation in 1901.

Years before Southall possessed a fire brigade of its own Captain Abbott had played the part of an amateur fireman, when at the great fire at Southall private asylum in 1883 Mr. Abbott, sen., aided by his sons, took a prominent part in rescuing the inmates. He has also been engaged, along with the men of his brigade, on several occasions, in rendering valuable public service at fires; and on one occasion Captain Abbott was presented with a gold medal in recognition of his services and those of his men.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

OUTSIDE OBSERVATION IN AUTUMN.

[6061.] On such bright and sunny days of autumn as we have been lately experiencing, though the flow of nectar in the flowers still spangling the verdant lea is a thing of the past, bees continue to forage far and near in the hope of obtaining some small pittance to aid the winter stores. And this is well, for it keeps breeding going, and secures to each colony a proportion of young and vigorous bees, which, in early spring, become the mainstay of the hive, when too many of its inmates are passing daily over to the vast majority.

I like, therefore, to see pollen-laden bees entering the various hives at such times, and I try to gauge the various operations carried on by the special activity in this line. When heavy loads of pollen are brought home on bright days when the bees are active, it is safe to conclude that all is well with the stock, and that queens are breeding. Such stocks are fairly certain to give a good account of themselves during the coming bee season, and, other things being equal, they will come out strong in early spring.

Pollen carrying almost invariably implies that the stock is in a normal condition, with at least some patches of brood in the centre combs; while many bees seen loaded would suggest that active breeding is still going on, and is an almost certain guarantee that the colony is headed by a prolific young queen. Numerous bees flying about neighbouring hives would lead me to suspect a desire to rob on the part of some stock. If a cloud of bees surround any one hive persistently searching for an entrance where none should exist, I would infer that some part of the stores are needlessly exposed, that some feeder requires more careful wrapping, that some accidental spilling of syrup has occurred, or that some super has been carelessly left above the quilts. A persistent attack on the front entrance, along with some fighting, would show that robbers are clearing out the contents of that hive. If there is great activity without fighting, the bees of the hive are probably carrying home stolen sweets from some other hive in an illegitimate way. The activity of a robbing or a robbed stock cannot be confused with any other excitement, as each has a character all its own, which becomes too manifest to mistake.

The merry glee and happy abandon of the young bees' first flight are never to be mistaken for any of these unwonted prowlings and excited agitation. They fly right in front of the hive merrily, spinning about in ever widening circles or spirals, marking their location, in a species of confused order; and they never make any pointed inquiry about securing access at any crack or cranny. They simply revel in space, essaying their new wings in the simple joy of flight. After a short spell of this merry play, they quickly return to their own hives.

On the other hand, great excitement, with bees running to and fro all round the entrance, all over the flight board, and up and down the hive front, generally means that the bees have lost their queen. The hurried questioning movements make it plain to the experienced eye that the loss has been discovered, and that scouts are out all round searching everywhere in eager, anxious quest of the Mother Bee—the one bond which has hitherto knit them together as a united body; for this single unit, on which their increase—indeed, their very existence—depends they mourn sadly as those who have no hope. There seems something like despair in their movements and demeanour, telling unmistakably of their sad loss.

Another, but a welcome sight at this season is the expulsion of the drones. Knowing by some wonderful instinct that these big, burly fellows have now become simple consumers of food, and are no longer required for the well-being of the colony, they mercilessly evict them. Nectar having ceased to come in from the fields, every ounce of the hoarded stores becomes a valuable asset, and so, for the good of the commonwealth, the fiat goes forth, and the drones are one and all ruthlessly ejected. The bee-keeper knows that this is wise cruelty, and on seeing the active little workers mastering the lumbering males, he knows that the stock is headed by a fertile queen without making any investigation of the hive interior. No less certain is it that when drones are retained well on towards the end of autumn, a diligent search should be made for a queen, and in nineteen cases out of twenty, if one is found, she is certain to be a drone-breeder. In such a case, she should be deposed and a fertile queen substituted in order to save the spring stock from extinction.

Again, a colony dull and lethargic, with few bees flying when other colonies are active, makes it clear that there is such a paucity of bees that it cannot be counted

on to survive till the spring in such strength as to be of any service.

These outside observations generally are a true index to the interior state of the hive, and an internal examination will in most cases reveal the very state of matters already diagnosed. All the same, it is well to examine every hive about the end of September to discover if there are plenty of bees, ample stores, and a laying queen. Simply remove the under quilt, glance down the outside combs, making a mental note of the amount of stores and the number of frames covered with bees. Then gently part the centre frames asunder and note if these contain small patches of brood, sealed and unsealed. No more than that is generally necessary. Close up the hive, give abundant wrappings above, make certain the roof is perfectly watertight, and leave it with every confidence that for six long months the bees are better left severely alone, without any interference whatever on your part, until the cheering power of spring again wakes them from their long lethargy to renewed life and activity in the new season then to open.—D. M. M., Banff.

BUYING GLASS HONEY JARS.

PRICE OF HONEY.

[6062.] I notice in Mr. Woodley's "Notes by the Way" (page 403) that he refers to your correspondent "Glass," in writing on the subject of washing jars. Some years ago I bought a six-gross lot from a well-known advertiser in your pages. It was about my first start in buying jars from wholesale dealers, and when the two heavy crates landed I could hear the crunching glass as the drayman hauled them off his cart. I signed for them as unexamined, thinking to recover from railway company if damaged. On unpacking, I found over a gross of jars broken, and consequently I put in my claim to railway company. In reply, I received a notification that they were not responsible for "foreign goods," which had not been unpacked previous to handing over to them. This being quite reasonable, I turned my attention to the dealer, and managed to get an allowance of 7s. from him. These jars cost me £5 14s. This year I have, I am glad to say, secured a six-gross lot of much superior jars for £3 10s. 6d.

The first-mentioned lot were so dirty that it was a trying task to wash a couple of dozen, and they broke at times, no matter how carefully you handled them. I tried tepid water, and at last washed them all in cold; and several minutes after standing them to drain, a crackling noise would be heard, and on examination one or two cracked right round. Later, in sending jars by rail, several were sure to break. Not only so, but every jar held close on to 18 oz. of honey. Now I buy my jars by sample, and hope never again to have such a lot as the first-named one.

The season with us has not been so fruitful as in most places, as we had no rain for nearly three months in the best of the season. I have for three years taken from one to three of my best hives to a heather moor here, but though bees were strong, they never filled a single section. This year I took three hives with six frames of brood each, and filled up each hive with dummy-frames, to a fresh moor, and each stock filled a 24-lb. rack of sections, and stored well below, and yet the variety of heather is exactly alike.

Our Editors' reply to "Business" (6057, page 406) makes one wonder where section-honey could be got in such large quantities in this country as to supply extensive stores like the "Civil Service," in order to enable them to retail good sections at 9d. each, with carriage and profit deducted. One can set the price paid to producer at not more than 6d. each. Anyone who has bought honey in large quantities knows there are always breakages which must be allowed for. It seems a pity that the retail price of good sections should fall below 1s., considering cost of production. Name, etc., enclosed.—BEEWAY, Cumberland, October 16.

[With regard to price charged by the C.S.S.A., we believe that the rule of the Association is to charge a certain percentage on first cost, so that the price depends on the producer's charges. —EDS.]

THE SALE OF HONEY.

[6063.] I think your correspondent "Business" (6057, page 406) quite right, and that bee-keepers should, and could if they take the trouble, always obtain 56s. per cwt. for first-class honey in bulk. Personally, I have booked orders for all my best crop at 9s. per dozen screw-cap jars, carriage paid, and think that allows the producer a fair margin of profit for the trouble of putting into jars, which, of course, must be (as your correspondent "J. B." points out on the same page) scrupulously clean, and have an attractive label, while also allowing the retailer a reasonable share of profit. From the letter of "Business" I take it he means that honey retails in towns at 1s. per lb., including the screw-cap jar, which I should think was about the average price. With regard to sections, I also have seen them of good quality at the C.S.S.A., price 9d., but I have also seen them there of a quality far from first, and perhaps if they take them as they come the price may be satisfactory to the bee-keeper; at the same time,

I know several shops in London where 1s. and even 1s. 3d. is charged for good sections carefully glazed. I do not produce sections myself, but only extracted honey.

Seeing that at the present time "guaranteed" pure honey can be bought at 6d. per 1 lb. in screw-cap jars, I think that British bee-keepers have enough competition to face from the foreigner without trying to cut each other's throats. I send name, and sign — PLEASURE AND PROFIT, Bucks, October 14.

[6064.] Perhaps I should have made it plain that, as pointed out by you in reference to 1s. per pound for honey, that price includes the pot. If the packer buys at 56s. or 60s. per cwt., carriage paid, he will, after paying for the cost of the glass jars, etc., have a clear profit of threepence per pound. This is, in my opinion, ample. I do not myself produce sections, but should say that the producer ought to get at least 7s. 6d. per dozen for these when packed in a cheap case. At this price it would not be very remunerative either. If a man really cannot find a direct market himself at a proper price, he would do less injury to the general body of bee-keepers by selling to a regular honey agent or merchant who does not retail himself. For he will not undersell when he disposes of it to retailers.

We should consider other bee-keepers in this matter. Many persons try to live by keeping bees, and it is hard that they should be undersold by persons who chiefly go in for bee-keeping as a hobby.—BUSINESS, Cornwall.

CONFINING BEES IN WINTER.

[6065.] I should like to know, through the B.B.J., what readers think of the following:—Last year a friend of mine had a swarm of bees, which he put into a makeshift hive, the latter being simply a box with single walls and fixed bottom. In the following autumn he covered the whole over (entrance included) with sacks, and placed a piece of zinc on top to keep all dry. I told him I thought he was doing wrong, and would probably smother the bees, but he said they must take their chance. To my surprise, this hive turned out to be his best stock in the spring, sending out a big swarm about the second week in May. This curious result inclines me to ask: How would it do to cover our hive-porches with light sacking, and keep the bees confined during the winter months? Signed—FARMER.

[The result of packing bees for winter, as in your friend's case, to our mind, forms "the exception which proves the rule," but is much on the same line as the well-known fact that bees, kept in skeps on old-fashioned methods, usually swarm earlier than those in modern frame-hives. But this cannot be said to prove anything to the disadvantage of modern methods of bee-keeping.—EDS.]

A BEE-DRIVING EXPERIENCE.

[6066.] I was asked on September 30 to drive a stock of bees for a cottager, and on calling was shown a box-hive holding fourteen frames, the latter being hung parallel with entrance, but the combs were built nearly at right angles to the hive front. In fact, they were running all ways, some built in bits like sticks and short clubs. Here was a task such as I had never had before. The hive was made of packing-case wood, sugar-boxes, etc., and, while frames were supposed to be of standard size, the box that held them was 6 in. deeper.

On starting my job, I first fixed a stout piece of wood over quilt and tops of frames; then carried the hive to a distance and inverted it bodily. I next fixed over it a body box containing frames of comb tilted up as we do a skep when "driving" in the usual way, but jarring with hammers instead of my hands. I should say there were three times as many bees as would be found in a skep, and the weather being dull, and chilly, it was the most tedious bit of "driving" to get the bees into upper box I ever engaged in. As for stings! I got more from that one stock than from over thirty of my own in manipulating them for a whole twelve months. The points I wish to emphasise are:—

1. That some of the frames had angle pieces on the undersides of top-bars, intended, I suppose, as guides to the bees in building the combs to, but the bees ignored them.

2. The frames were irregular in size, some being so deep as to leave not much space below, while others allowed a lot of room, which was nearly full of wax-moth cocoons; the same with the side-spaces.

3. Then the hive-roof is made of twenty-five or more separate pieces of rough packing-case wood, and all the joints formed secure harbours for wax-moths, earwigs, etc.

4. This hive (dear at a gift) was made by and sold to the owner by a bee-keeper who acts as judge of honey exhibits at our local show, and poses as an expert. Small wonder that, with such teachers, cottagers (in this case a farm labourer) do not take readily to frame-hives.

With regard to wiring frames, I can never understand why wires so often are crossed. My own preference is for three parallel wires, one about 1½ in. below top-bar, one in middle, and one wire about

1½ in. from bottom-bar. The wires are threaded through and fastened to 18 gauge wire nails by two or three turns, before nails are driven home, the wire being first pulled taut till it stretches. Then foundation neither sags nor buckles. Time occupied in wiring, twenty-five to thirty frames per hour.

I am glad to note (on page 397) that others are more successful than myself in uniting driven bees to queenless lots, or lots with drone-breeding queens, all of which goes to prove that experiences vary and opinions differ.—FRANK JARVIS, Bucks, October 13.

P.S.—With me saw kerfs in top-bars makes a splendid harbour for wax-moths. I use full sheets of foundation, cut to fit exact, and with three or four duckwing feathers closely and neatly bound together as a "soldering iron," I can prepare about forty to forty-five frames per hour.—F. J.

Echoes from the Hives.

Chichester, Hants, October 12.—This season in the "Sunny South" has been rather too sunny for a good honey-yield, the flowers being dried up before nectar began to be stored therein; our returns, consequently, are below the average again this year, making three poor seasons in succession. I, too, like our friend, Mr. Woodley, have noticed that swallows will snap up a bee in its flight, and this seems to make the bees vicious—in fact, they sometimes appear to chase the swallows, stinging them, no doubt, if they can get a prod in under the wings of the birds. I have also seen sparrows alight on a hive and wait for the bee to drop on the alighting-board, when it is snapped up and carried off for the young ones, and very soon the bird returns for more. On the other hand, there is no doubt that sparrows do a lot of good in feeding their young on other insects, such as caterpillars, etc., as also does the swallow; but so long as they will not leave the bees alone we must class them as "bee enemies."—J. D.

Queries and Replies.

[3932.] *Suspected Queenlessness.*—While looking through my hives a few weeks ago I found one stock had not killed off its drones, and, as there was no brood, sealed or unsealed, I was pretty certain it was queenless, so I united a lot of driven bees to it, well sprinkling both lots with flour. There appeared to be no fighting, and since then they have been fed rapidly to ensure their having sufficient stores for winter. I looked through the frames to-day, and find that they have an ample supply of food now, and are strong in bees, but there was no sign of any brood, though I saw several bees carrying in pollen, but the drones are still there, so I ask: 1. Do you think that the queen belonging to the driven bees has been killed? 2. On the other hand, is there any chance of the bees not having turned out the drones on account of the quantities of stores (syrup) they have been getting lately? If so, as the feeding has now stopped, perhaps they will be turned out in the next few days. 3. Does this ever happen? If not, what is the best thing to do? I do not want to unite them to any of my other stocks, as the latter are all strong, as is also this doubtful one. 4. Is it too cold and late in the season to buy a fertile queen and to introduce her safely? Please let me know as soon as possible, as it will become more difficult as the weather gets colder. Name enclosed, but please reply to—GRIP, Aberdeenshire, October 10.

REPLY.—1. We fear the queen has been killed during or after the uniting operations. 2. This is not at all likely. 3. Your best course will be to purchase a fertile queen and introduce her as soon as convenient. 4. In your case we advise as above, but act without delay.

[3933.] *Transferring Bees.*—As a beginner in bee-keeping, may I ask for a little advice under the following circumstances:—I bought a hive and bees early in September last, and on looking at them a few days afterwards was surprised to find that in almost every frame but the first two, part of the combs had broken down. I have removed the two back frames, leaving five still in the hive. I therefore ask: 1. Should I let the bees alone until spring, and, if so, how should I proceed to get them into a new hive which I have made from instructions given in the "Bee-keepers' Guide Book"? 2. I should also like to know how to join the Bee-keepers' Association. Please reply to—ANXIOUS, Durham, October 10.

REPLY.—1. Your best course will be to deal with the bees as proposed, following the directions in "Guide Book." 2. Write to Mr. Jas. Waddell, Alwinton, Northumberland, re joining the Association. He will, no doubt, give the desired information.

[3934.] *Queen Taking Flight from Comb.*—I should be obliged if you could advise me in BEE JOURNAL on the following points:—1. On August 26, when examining a hive containing a young laying queen (which had come from a distance and had been introduced for about a fortnight), I

inadvertently placed the comb—on which the queen was—outside hive, and she took flight. I did not see her re-enter the hive, the entrance of which was, of course, strange to her, and therefore concluded that she was lost. There were then eggs in the hive; but on September 1—five days after—there were still eggs on three combs. Do you think this proof positive that she went back? I say this, because the bees are now very excitable. I have looked through once, but could not see her. I do not wish to requeen if you think she must have re-entered the hive. 2. One of my stocks which became affected with foul brood this summer was, in my absence, extensively robbed by wasps, and by the bees of my other hives, consequently several of them show signs of the disease, but two good, strong stocks are so far free; but it is almost certain that they have stored some of the infected honey, and they require no syrup or candy to carry them over till next year, some of which, I suppose, will be used by them during winter and spring. Can I do anything to keep them free, except putting naphthaline in the hives? Thanking you in anticipation, I sign—B. C. O., Birmingham, October 11.

Reply.—1. With regard to flight of queen from frame of comb, it is more than probable that she either came back to the comb unseen, and was thus returned to the hive without being noticed, or else she joined the flying bees hovering above the frames, and so entered the hive. If there was no sign of bees having started queen-cells, it is fairly certain that the queen was not lost, and the eggs seen on September 1 confirms this. 2. Nothing can be done at this season to remedy the unfortunate state of things brought about by "robbing" the diseased stock, beyond using preventives as proposed.

[3935.] *A Beginner's Queries.*—I must thank you for answering my last questions in B.B.J. I have safely united the late swarm as advised. May I again trouble you to answer the following? 1. My hives are situate 100 yards from a burn—or small stream; will it be necessary to put down water troughs for the bees near the hives? 2. When working among my hives, after a puff or two of smoke I observe that fighting often takes place between bees in the hive and those returning from the fields laden with pollen, some of the latter being killed at the entrance. Am I right in saying that the returning bees have a different scent from those in the hive, and that this causes the fighting? 3. Why is it advisable to winter bees on their summer stands? 4. What is the meaning of the term "giving room in advance"? Suppose I have a hive holding ten frames, the bees having been wintered on nine of these; if I add the tenth frame to complete the full number, and also give a super at same time, is that giving room in advance? 5. Can we give bees too much warm covering when packing them for winter? My own bees are covered with six squares of carpet, and have also cork-dust cushions on top. Is that too much? Do they consume more food when kept warm than when only slightly covered? 6. Are eight bar-frames enough to winter a strong colony on?—S. Harris, Aberfeldy, October 9.

P.S.—Should this meet the eye of some brother in the craft who has seed of the "Chapman honey plant" to spare, and if he will be so good as to send me a few along with his address, I will gladly send in return a dozen of Toogood and Sons' Canterbury bells.—S. H.

Reply.—1. No water troughs are required with a running stream so near at hand. 2. We have not experienced any such fighting as you complain of, but it could be got over by using no smoke at entrance, but only above top-bars of frames. 3. Because they do better when wintered so than in any other way. 4. Giving surplus-room a little before the bees feel the inconvenience of overcrowding, and begin to remedy it by swarming instead of taking to supers. 5. Strong stocks require but little covering for winter, on the wise principle that "the best packing for bees is *bees*." Your "six squares of carpet" need no cork-dust cushions in addition. 6. A strong colony should be wintered on as many frames as the bees cover when being packed for winter.

[3936.] *Dealing with Wax-moth in Hives.*—I have myself been troubled with wax-moth (Galleria cereana). In my own case I found the hive contents quite destroyed, so burnt the frames and combs, and then well washed out the hive with a strong solution of Calvert's carbolic acid and water. In this way I cured my own apiary trouble. Several hives belonging to neighbours have been affected with the same trouble, and it means quick destruction to the hive affected when the moth-grub gets a hold. I use, and recommend the use of, naphthaline freely. Please say in B.B.J. is there any better way of dealing with the pest? 2. What is the best method of dealing with wax-moth without destroying the colony where it is found?—E. M., Wilts.

Reply.—1. We do not know of any better way than the one followed by yourself—in fact, the result shows this. 2. Prevention is so much better than cure when dealing with wax-moth trouble that we consider continued watchfulness for the moth and its larvæ, and prompt destruction of either when found is the best way of dealing with

it. Once in full possession of combs, with the tough silken galleries of the moth-larvæ formed in the midrib of same, it is impossible to oust them without destroying the combs.

[3937.] *Extracting Wax from Old Combs.*—In the BRITISH BEE JOURNAL for October 5 (page 397) a Mr. Frank Jarvis gives a method of extracting wax from old combs. He says: "I pack this (tin) full of comb edgewise, but upside down." Can you tell me what he means by "upside down," as if one inverts comb, it has no different effect, and yet he cannot be referring to the tin? 1. I should, therefore, be very much obliged if you would explain to me what it means, as I wish to try his method of extracting wax, but must understand it first. 2. I have a colony of bees in a wooden box, which I want to drive and unite to a hive (within a foot of it). I thought of driving the bees from the box into a skep, and flouring them well. Then, having floured the bees on the frames in the hive, jerk the bees from the skep down amongst them. 3. If I see that the hive has six frames more or less well filled with honey, would that be sufficient food for the lot, with the addition of a cake of winter candy? The driving ought to have been done before I know, but I have not had the opportunity or help. It is not too late, if I choose a fine warm morning, is it?—BEGINNER.

REPLY.—1. The cells in the two sides of a comb are built with an upward incline as the comb hangs in the hive. The meaning of "upside down" in Mr. Jarvis's letter, therefore, is that the position of the comb is the reverse of that it occupied when in the hive, and the cell must incline downward. In this way the wax runs downward into the tin vessel mentioned. 2. The method of uniting proposed should answer all right if you manage to drive the bees from the box into a skep; but this will not be very easy for an amateur, unless a very warm day affords the chance of making the bees "run" well. 3. Yes; the food proposed to be given will suffice. The advertisement you name does not appear in our issues of August 10 or 17, nor in many earlier numbers searched, so we cannot help you on the point inquired about.

Bee Shows to Come.

October 19 and 20, at Kilmarnock, N.B.—Honey Show in connection with the annual exhibition of the Ayrshire Agricultural Society. Schedules on application to John Howie, Secretary, 58, Alloway Street, Ayr. **Entries closed.**

November 5 to 18, at Plymouth. — Annual Show of the Devon B.K.A., in conjunction with the Plymouth Exhibition. Twelve classes, with good prizes, for honey and bee appliances, including special prize of £1 1s., for two 1-lb. sections. Schedules from F. W. Palmer, Turner Cottage, St. Badeaux, Devonport. **Entries close November 1**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances. Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries close November 1.**

Notices to Correspondents & Inquirers.

MEDICUS (Argyll, N.B.)—Medicating Bee-candy.—We do not think the double dose of N. beta will do any serious damage to the bees, but they will probably be less disposed to take the food than if the latter was properly medicated. Should the bees decline the overdosed food it will be needful to remelt a couple of the cakes by stirring them in four pounds of unmedicated liquid candy.

CYMRU (Manchester).—Bee-keeping in N. Wales.—The correspondent of some years ago—whose contributions were signed "S. J., St. Beuno's College, St. Asaph"—was keeper of the college apiary at the time. He is now occupied in clerical work abroad. The college apiary is now managed by the Rev. T. Evans, who might advise you with regard to Colwyn Bay as a bee district. Referring to Denbighshire, there is no B.K.A. for that county. Mr. Richards, Gabalfa, Cardiff, is hon. sec. of the Glamorgan B.K.A.

W. B. S. (Wellington).—Diagrams for Bee-keepers.—The diagrams referred to are out of print, and we cannot say anything with regard to their being reprinted.

NOVICE (Badsey).—Cleaning Wax Extractor.—It was rather careless to allow your new "Gerster Extractor" to get rusty after once using. It should have been well scalded out with clean hot water, and thoroughly dried before putting away. The rust must be removed by the ordinary process followed in cleaning a tin pan.

J. S. G. (Lancs.). — Complaints against Advertisers.—It is obviously impossible for us to explain away the difficulties between advertisers and their customers. We might as well be asked by advertisers to "explain" why some customers do not pay for the goods ordered. Our knowledge of the person referred to—extending over many years—points to his being an honest and well-meaning man. That is all we can say.

Suspected Combs.

D. M. (Campbeltown).—Sample No. 1 shows slight signs of incipient foul brood in three cells only, the rest of dead larvæ being "chilled" only. No. 2 is distinctly diseased, showing foul brood in every sealed cell.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Wednesday, 18th inst., at 105, Jermyn Street, S.W., Mr. E. D. Till being voted to the chair. There were also present Dr. Elliot, Messrs. W. Broughton Carr, W. Sole, and the secretary. Letters of regret at enforced absence were received from Messrs. R. T. Andrews, J. B. Lamb, R. Godson, A. G. Pugh, W. F. Reid, and W. Richards.

The minutes of the previous meeting were read and approved.

Four new members were elected, viz.:—Mr. Geo. Dow, Yew Tree Cottage, St. Mary Cray, Kent; Mr. Harry Farne, Fishbourne Mill, Chichester; Mr. E. A. Mason, Andover Road, Highclere, near Newbury; and Mr. Wm. Yarwood, Milne House, Wamphray Glen, Beattock, N.B.

The Finance Committee's report, giving details of receipts and expenditure to date, was presented, and formally adopted.

On the recommendation of examiners, it was resolved to grant third-class certificates to Messrs. G. C. Burgess, Wm. Gee, and John Tharp.

The secretary made a report in regard to the prospects for the forthcoming second-class examination to be held in various centres on November 17 and 18, which was approved.

The remaining business was of a purely official nature, not of general interest.

The next meeting of the Council will be held on Wednesday, November 15.

CONFERENCE OF BEE-KEEPERS.

(*Continued from page* 413.)

Mr. P. Scattergood, in opening the discussion on the third item on the agenda, i.e., "the strength of the standard frame," said that personally he did not think the top-bar needed much strengthening. He preferred frames with a solid top-bar, free from saw-cut or wedge arrangements of any kind, but having a bottom-bar 3-16ths or a ¼ in. thick. If such frames were properly wired and the foundation fixed to top-bar with molten wax, there was not much danger of any deflection or sagging. His friend, Mr. Geo. Hayes, secretary of the Notts B.K.A., however, took a different view and—being compelled to leave the meeting at an earlier stage—had requested him (the speaker) to show to those present the frame he held in his hand as a suggested improvement on the "standard," as he considered that the top-bar of the latter needed strengthening. Mr. Hayes said that if the top-bar was 9-16ths of an inch thick instead of ⅜ as now, the frame would be much more rigid, and if extra strength was added on the underside of top-bar it would be interchangeable with the present standard frame and, consequently, not interfere with hives in use, nor would the cell-capacity of the frame be reduced to any appreciable extent, as only 3-16 would be added to the top-bar, and the inside of the frame correspondingly reduced. Other advantages which Mr. Hayes claimed for this alteration were, that the frame would bear a greater strain, being stronger at the shoulders, and as he proposed that the frame-ends or lugs, up to the side-bar should be reduced to the thickness of the standard, there would be no alteration of the existing "metal ends" now in use. Those were Mr. Hayes's suggestions, and he (Mr. Scattergood) begged in his name and on his behalf to submit them to the meeting together with the frame made by that gentleman according to the particulars already given, and as a decided improvement on the one at present in use.

Mr. Reid said that the present frame coming into general use was not the standard frame as originally fixed on by the B.B.K.A. Although the outside measurements were kept the same, a supposed improvement had been added in the shape of a slot or saw-cut down the centre of the top-bar. That alteration reduced by a considerable percentage the strength of the frame—perhaps 10 per cent. It was really more, but he did not wish to exaggerate. The "saw-cut" was an advantage probably to those who possessed a large apiary, because foundation was the more easily fixed; but this slot was carried too far, namely, right through the side-bar and into the shoulder or lug of the top-bar, the strength of which was appreciably diminished by the cuts so made. No doubt most of those present were expert enough to keep their frames in good condition, but it was not an uncommon incident to find frames in the hives of some cottagers and also of indifferent bee-keepers so firmly propolised down that, upon attempting to raise a frame the end of top-bar would snap off at the shoulder immediately. The same thing happened at times when shaking off the bees from a frame, and in such a case resulted in confusion and plenty of stings. He did not wish to suggest any particular improvement in the present "standard," but he thought there was great need of one, seeing that there was a weak point

in the frame now in general use. Mr. Hayes's frame seemed to be an improvement, being a far stronger top-bar.

Mr. Carr said he had been asked to submit a frame for inspection which had been subjected to several years' trial, and was in many respects like the original standard. There was no slot in the top-bar, but the latter was of a little extra width. The maker declared that this additional width, coupled with the omission of the saw-cut, entirely did away with the complaint of "sagging." The top-bar was very slightly less than an inch in width, and as a result of this extra width, he (Mr. Carr) had been informed that there was a complete absence of brace-combs between top-bars and supers. This was proved after several years' trial of the frame in a large apiary. Asked how the comb-foundation was fixed without a split top-bar, Mr. Carr said it was attached to the bar with molten wax, than which there was no better security from a breakdown.

Mr. William Herrod said he liked the frame shown by Mr. Carr much better than the usual one. He had used it for several years, and at present had about 600 to 800 similar frames in use in his apiary. No brace-combs resulted, and the frames kept free from propolis. No alteration either of the hives or metal ends now used was needed, the latter being adjustable without any difficulty. The great advantage was doing away with the saw-cut and the evils resulting therefrom. Indeed, he thought it would be a good thing if all bee-keepers could be compelled to give up the use of the saw-cut in frames. It was quite as easy to fix foundation to a solid top-bar as in any other; and if anyone doubted this he was quite willing to demonstrate the truth of it to him; indeed, he could work quicker with molten wax than with the saw-cut in frames. The wax-moth was undoubtedly on the increase in this country, and he attributed that largely to the use of cut top-bars He had in use a number of the frames he was objecting to, some of which sagged very, very much, and he had known of cases where the end of a frame had broken off completely on being handled.

Mr. Carr here jocosely observed that the maker would have done far better by asking Mr. Herrod to introduce his frame to the meeting, seeing that the latter had a large and favourable experience of it, which he (Mr. Carr) lacked.

The Rev. Mr. Lamb was old-fashioned enough to use molten wax and the glue-pot. He had always preferred Abbott's frames with wooden shoulders. He did not like the metal ends now in use. Mr. Bevan was glad to hear the last speaker's eulogy of Abbott's frames, which would stand any amount of shaking, and had no saw-cut in which to harbour the wax-moth. These solid frames would carry six or seven pounds of honey without any sagging.

The Chairman, in closing the discussion, said he thought the general opinion of the meeting was that there should be no departure from the outside measurement of the standard frame, but there was apparently a rather just complaint against bee-keepers who would not take trouble in the safe fixing of comb-formation. The greatest objection to Abbott's frames was that they would not "go" with anything else except themselves. What seems to be required was a frame which, while possessing the same capacity as the "standard," would not sag, nor offer a refuge to the wax-moth, which the slotted top-bar undoubtedly did. There were several good frames on the market at the present moment, and the only question was the increase the cost in some of them.

General Sir Stanley Edwardes, as an amateur carpenter who made his own hives and most of his bee appliances, said he might be allowed to say that the only proper test of the strength of the top-bar to a frame would be to apply the weight all along its length, and not merely in concentrated form on one portion of the top-bar. If wires were used the weight was equally distributed. He had never owned a "sagged" frame, though he used the ordinary B.B.K.A. standard one. He thought, however, that the top-bar ought to be slightly wider; and certainly the saw-cut should not be carried so far along the top-bar as it now was, when all danger of breakage at the ends would be avoided. Abbott's frames unfortunately could not be used with any others. He had been obliged to discard them on that account. He could not help thinking that the slot enabled a bee-keeper to fix his foundation with greater ease than otherwise would be the case.

This concluded the several items on the agenda paper and the remainder of the time was occupied in the *conversazione*.

Mr. Faunch desired to draw attention to an advertisement which appeared in the window of a certain grocer's shop, wherein was also displayed honey for sale in jars, on which there was a guarantee in the following words:—"This honey is pure and the best I have seen this season," then followed the name of a "Certificated bee expert, B.B.K.A." This label did not say that the produce was British honey, and he (Mr. Faunch) admitted the value of the certificate was very questionable. Nevertheless, he thought the parent Association should be made aware of the fact in case they might wish to take action thereon.

The Chairman thought the matter was one that they could take no cognizance of. The grocer was, of course, at liberty to

act as he had done, and so far as he (the chairman) knew, the tradesman had not infringed either the Drugs or the Adulterated Food Acts.

Mr. Faunch submitted that if the man whose name appeared on the label was not a B.B.K.A. expert, then, at any rate, there would be ground for the committee taking action, as they would naturally desire to protect their own certificate.

Dr. Elliott and other gentlemen thought experts should never be encouraged to give certificates of that sort.

Mr. Faunch remarked that this was the second case that had come under the notice of their county secretary, for whom he was speaking, and that gentleman had written to a person who signed himself "A certificated expert," challenging the latter's right to use the term, upon which the person challenged replied that he was formerly an expert and had signed himself as one from force of habit! The Rev. Mr. Lamb said—"Once an expert, always an expert."

Mr. W. Herrod thought there had probably been some fraud regarding the sale of honey, an effort to correct which was being made. He wished a sample of the honey in question had been put before the meeting for examination.

The Chairman reiterated his view that nothing could be done, but whether this was so or not, legal process (if any) must be taken by the buyer. The Association's certificate merely proved that the holder had passed an examination in a certain subject.

Mr. Reid felt that the Association ought to acknowledge some responsibility in the matter. It seemed to him that they should endeavour to protect the honour of their experts. If foreign honey was sold as British honey that would be an offence against the Merchandise Marks Act, while if the purported honey was not honey at all then the inspector under the Adulterated Foods Act could interfere.

Mr. Herrod said that if the B.B.K.A. could not protect their own certificates, then the latter appeared to be of no use.

A gentleman, whose name did not transpire, asked if it was not a fact that an expert had to produce a guarantee of character before he could obtain a certificate, and suggested that the gift of a warranty like that named should entail the forfeiture of the certificate. Another speaker submitted that the signature "expert" would lead the public to infer that the honey was "British."

The Chairman showed a sample, which was passed round, of Jamaica honey, sold as "British." He had obtained it from a wholesale house that day. He also remarked that in Essex some honey was offered at 4d. to 4¼d. per lb., to which a member replied that he had bought some at that price, but doubted whether it was English.

Inquiry was made as to whether the glass jar furnished with the expert's guarantee bore any date; the reply was in the negative.

Dr. Elliott thereupon proposed that if the person named was found to be a duly qualified expert he be warned not to use his certificate in the way complained of.

Mr. Herrod seconded the motion, upon which Mr. Scattergood moved (seconded by Mr. Pugh) as an amendment, that the executive of the B.B.K.A. be asked to consider the complaint and deal with it.

Dr. Elliott and Mr. Herrod accepted the amendment, which was carried *nem. con.*, the Chairman promising that the matter should be brought before the Council.

Mr. Carr exhibited a section of heather honey forwarded to the B.B.J. office, from Perthshire, with the object of getting an opinion on its quality. But what surprised him was the terms of the inquiry (coming from a Scotch firm) which expressed a doubt whether it was heather honey at all. On this point he had assured the senders that the sample was genuine heather honey of high quality, which he intended to enjoy on his own breakfast table.

The section was afterwards handed round for examination, and much commended.

The Rev. Mr. Lamb thought it strange that Scotch grocers should not know heather honey, but if they did not the London tradesman's ignorance was not to be wondered at.

Mr. Herrod said he mixed with bee-keepers a great deal, and heard one remark on all sides—namely, "What do we get for our cash when we purchase honey?" While in the room that evening a gentleman had told him that he had been offered some honey which was designated as "Osborne's pure honey," and sold under the *imprimatur* of the Essex Bee-keepers' Association. Naturally the inference was that it came from Essex. This gentleman offered to buy 1 cwt. of it. He thought that was a misuse of a county association's privileges. There was no doubt all bee-keepers wished to be assured that the parent society had their interests at heart, and would protect them against the sale of foreign honey as English produce. There was no objection to the sale of foreign honey as such, because English honey could compete with it anywhere.

Votes of thanks to Mr. Till and Mr. Weston for their presidence during the evening brought the proceedings to a close.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Twelve Million Bees!—Imagine the roar made by four times that number of wings, tiny though they be. Yet this is what Mr. Root lately saw and heard at Mr. Alexander's bee-yard. "Just think of it! Seven hundred and fifty-two strong colonies, all in one locality, bringing in honey at the rate of *a ton and a half a day*, weather permitting. Just imagine, if you can, that in their keen desire for honey from buckwheat and goldenrod, one-half of the bees are in the air. Estimating each colony to have about six pounds of bees, this would make in the air 15,000 bees per colony that are either going or coming from the fields. Multiply this number by 750, then focus the flight to one spot, all in one yard. You can imagine the rest!" I really envy the man who sees and hears such a vision of delight, and would go a long way indeed to see and hear it. On reading the account and figuring out the total, I could only feebly echo Dominie Sampson's favourite exclamation—Pro-di-gi-ous!

Deposing Drone-breeders. — Brush the bees on the ground a little way from their hive, and transfer a nucleus colony with their queen to the same; close entrance for half an hour to give nucleus colony time to settle. Then open entrance again, when the brushed bees will quietly and gradually join the nucleus, and all will be well. This is from "A Bee-keeper," but derived from a German source. The next paragraph is original, and editorial.

Ample Stores.—"See to it that your bees have more than enough stores to carry them through the winter. A good colony will consume much more food from the time of the first flight until the spring honey-flow than through the whole of the cold months. A full larder means a big colony, other things being equal, and it means it without any fussing with feeding and its accompanying danger—*danger to the bees and your reputation.*" The last clause might have been left out. Read in connection with the article on "Sugar Feeding," it makes me think that the Editors are endeavouring to be *righteous overmuch*. I say so, though I never feed, and years ago consigned feeders to the bee-museum.

Honey AND *Increase.*—"Unless in an extremely good locality, I would not expect to have a large yield of honey after increasing fifty colonies to 150 in one season," writes the first-prize essayist in the *Australasian Bee-keeper*; and then he modestly tells us that an average of 200 lb. spring count, or a total of 10,000 lb. from the fifty in "plenty localities" might be exceeded. I rubbed my eyes on reading this, and smiled a smile of incredulity. But on reflection I remembered this was in sunny Australia; and, further, that the statement was backed up by the Editor placing this paper first, and thereby bestowing on it his *imprimatur*.

The two views of Messrs. Pender's machine shops and their two bee-yards show the importance of the industry in New South Wales. They are using quadruple nucleus hives, allowing two to be united with ease. "Any one nucleus can be fed on its own ceiling. Each has a cover of its own, and a telescoping cover over the lot. Four nuclei take little more room than one, each entrance is well marked, and the small lots gain the advantage of proximity to the others." I like this style of nucleus. One somewhat similar was described and illustrated by Mr. Sladen in our last volume.

The Odour Theory.—Ten drones were pulped and rubbed on clean hands, with the result that the hive was manipulated without a sting. Going to *another* hive, as soon as the hands came in contact with the bees they stung viciously. Repeated trials always produced the same results. "It was only by washing the hands carefully between the visit to each hive, and then giving them the odour of the colony to be visited, that I could manipulate the insects without being rewarded by a number of stings." Further, queens were exchanged, after being copiously covered with drone juice from the hive into which they were being introduced. Perfect tranquillity followed the transfer, the bees not even being aware of the substitution. These experiments, recorded by Mr. Dadant, are at least interesting, and lean to the scent theory. I think Mr. A. C. Millar will find it hard work to convince bee-keepers that the old belief is a fallacy, although inexplicable exceptions may at times tend to strengthen his new opinion.

A Government Apiary. — Prof. Cook writes in *A.B.J.*: "One of the prominent features of the fine, beautiful lawn of the Department of Agriculture at Washington is a handsomely-arranged and quite large apiary. Does it not show great good sense on the part of the Department to recognise the importance of the honey bee? I acknowledge a little more pride, happiness, and patriotism, as I noted this index of broad-mindedness." *Gleanings*, by the way, gave a series of excellent views of this "Model Apiary." Would that our Government would follow suit, and do *anything* for the benefit and spread of apiculture!

Honey Biscuits.—"The National Biscuit Co. has recently purchased on one consignment *seventy carloads of honey*. All store cookies, jumbles, cakes, pastries, that keep

any length of time, must have some honey in them. Honey, the bakers say, keeps the cakes moist and nice, and they must have honey *pure*." Here must be an extensive demand for honey, and possibly a large part of that imported finds its way to such centres, in this way not coming in keen competition with the best grade of home production.

Teacher Bee-keepers.—A splendid photograph is given in *Gleanings*, page 914, of a number of "schoolma'ms and schoolmasters" taking their first lesson in bee-keeping at Messrs. Root's yard. It speaks much for the gentleness of the bees that every one in the group held a comb, just taken out of the hives, one mass of bees. Further, it shows forcibly the sense of discipline these teachers have acquired, and which they hope to hand on to the rising generation, that they, who never handled bees, should have such excellent command over their nerves as to stand the trying ordeal, even though some got stings—and most of them were of the gentler sex. I venture to assert that no other similar body of young men and young women in any other line of life would come out so triumphantly from such a test. Thanks Dr. Miller, for what you say of my young brethren in the group—but why leave out the gentler sex? *I* think they are so *bonnie* that they must all be of Scotch descent. What can I say more than that?

Peace in Beedom.—The Editor of the *Review* says: "Peace now reigns in the apicultural world. There are no bickerings, no warring factions. Long may this condition last." I add to the last sentence a loud Amen!

An Old Correspondent.—I note from the *Bee Bulletin* that your erstwhile correspondent, Dr. Hamlyn-Harris, has been chosen honorary expert to the Queensland Bee-keepers' Association. He presided at a meeting called to discuss the subject of honey export, and told several home truths to the assembly, perhaps some of them rather unpalatable, about their methods and their honey.

New Zealand Honey.—A trial shipment of 69 cwt. realised £69, and, after deducting all charges, the producer pocketed only 2d. per lb. It could have been sold in the colony "at 3½d. clear." This cannot give much encouragement to Australasian bee-keepers who are hungering and thirsting after a share of the home market.

An Unsolvable Problem.—At the forthcoming Chicago Conference, according to the programme, Mr. E. D. Townsend is expected to answer this trying puzzle: "*How many bees should a man keep?*" I do not envy him the figuring which lies before him between this and December 6.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

REVIVING MORIBUND BEES.

[6067.] Some time ago I was looking at a small stock of bees that had been starved. They stuck in the cells and on the combs, as starved bees do; but, on breathing gently on them, there was a slight movement of the legs of two or three of the bees. On noticing this, I carried the hive into the house, and placed it by the fire for a little while, then, lifting out a comb at a time and warming it. Presently a few of the bees began to revive and crawl about, so I sprinkled some warm syrup over the comb and bees. Finally I closed the hive entrance with perforated zinc, replaced the quilts, and next morning took the lot back to its old stand. Later on, when transferring the frames and bees into a clean hive, I saw the queen in the old hive, and, in lifting her out, she stung me on the hand; I lifted my hand to show some friends and the sting came away from her, so there was no mistaking the fact. Is not this a rather novel experience?

On the morning of September 24, while walking down a lane here, I saw a queen and drone bumble bee in the act of copulation. The thorax of the queen was black, the segments of the abdomen being of red colour and the drone was small with yellow bands. They flew slowly for a hundred yards or so, then dropped into a bramble-bush. The day on which this took place being very cold, I was much surprised, especially on noticing that hive bees were not flying at all at the time. I expect this is also a rather novel experience?

The season here has been a poor one for most bee-men, though one or two seem to have done fairly well. In conclusion, may I ask you to kindly say whether the heaths, of which I enclose specimens (marked B, C, and D), are useful for bees? Thanking you for past kindnesses.—Ernest Hart, Bisley, Surrey.

[It is not at all uncommon to find that bees, apparently dead, may be revived by warmth and warm food, but we cannot call to mind a case of a queen bee using her sting without being pressed against the flesh of the person stung. Regarding the three sprigs of blossom sent, B and D are

heaths, the first being the *Erica cinerea* (or bell heather), while D is the *Calluna vulgaris*, or common "ling," the latter being the best for honey. The sprig marked C is not a heath, and is of little value for bees.—EDS.]

JUDGES AND HEATHER HONEY.

[6068.] I read with pleasure your report of the late Dairy Show, but the paragraph referring to the class for extracted heather honey is, to me, rather puzzling, though it meets with my idea of what genuine heather honey should be.

The paragraph I refer to reads thus:—"There are a few samples from *Erica cinerea*—thin, dark-coloured, and liquid, as usual—but they, of course, stood no chance with honey that will not run from the jar when turned upside down."

Now, without wishing to criticise the verdict of the judges, the exact opposite was the case at the late show of the Surrey B.K.A. at the Crystal Palace (where I was awarded the County Council medal for sections of heather honey), as this dark-coloured liquid honey secured first and second prizes in the class for heather honey in jars, while my exhibit of the amber-coloured honey, which, when the jar is turned upside down would not move, got no higher an award than "h.c." I may say the last-named honey, to which I refer, was entirely from the true "ling" (*Calluna vulgaris*).

I am aware that some years back, when Mr. W. Broughton Carr officiated with other judges at the show of the Surrey B.K.A., they awarded first prize to this delicious jelly-like "ling honey"; but it appears that different judges have different ideas of what really good heather honey is, or should be.—W. A. WOODS, Normandy, Guildford.

BEE NOTES FROM MIDLOTHIAN.

BEES REFUSING TO UNITE.

[6069.] Like your correspondent, Mr. F Jarvis, who writes in B.B.J. of September 14 (page 366), I had the same thing happen with a driven lot of bees which I tried to unite to a queenless stock. On joining up the two lots, the driven bees were sent sprawling out of the hive by the queenless bees, although I floured them well before uniting. Such an occurrence has never taken place in my apiary before.

As regards swallows carrying off bees, my opinion is that all insectivorous birds will prey upon bees but the swallow tribe. Tits and sparrows will seize and carry them off wholesale; sparrows are very cute when so engaged—in fact, you can hardly detect them. In reply to "C. S. F." (6016, page 367), who mentions the emptying of supers by "earwigs," I have found that earwigs are very fond of honey, and have emptied some old brood-combs I had by me, with a good deal of honey in them. They were kept in an empty hive carefully closed against all robber bees.

I see there is much difference of opinion with regard to fixing foundation. My own simple plan is to press the top edge of the sheet between my thumb and forefinger; when thus flattened the foundation slips easily into the saw-cut, and is pushed so far through as to project slightly on the upper side of top-bar, then run a hot poker along the projecting edge, and the sheet of wax is made perfectly secure.

The past honey harvest here has been very poor, especially the heather. Most of the queens ceased laying when they were taken to the Pentland Hills (north side), and about mid-August the bees had deserted supers, thus making some of the less experienced bee-men conclude that their hives had swarmed at the heather. At present my bees are having pretty good flights, but the cold is coming rapidly, and everything should have been finished for this year in the shape of feeding, uniting, etc., if we are to get full advantage of a good season in 1906.—"MAC.," Midlothian, October 23.

MOVING BEES IN WINTER.

[6070.] Will you aid me with your advice in the following:—I have just had delivered here two stocks of bees bought from a man in Cheshire. I intend to take them to Colwyn Bay, and establish them there, but wish to know if it would not be better to winter them here and take them over in the spring, rather than have the excitement of another removal during the present cold weather? We have had bad frosts and cold winds for the last ten days.

The owner says that one stock is well provisioned for winter; but the other, he says, has nine of its ten combs filled about half way down, and he would have fed it up *now* had it remained in his possession, but I think it is too late now to feed with syrup. Do you agree? If so, I think I could leave the stock until later in the year and then give a candy cake. I should be grateful for your advice.—T. P., Sandiway, Manchester, October 23.

[The moving of hives, either now or later on, is simply a matter of convenience; but if the stock supposed to need more food for safe wintering is to be fed, we advise deferring the removal till the bees have taken a 2lb. cake of soft candy. On the other hand, we think that a stock of bees having "nine combs filled half way down" with food (presumably sealed over), should not be considered as short of stores for winter. The main point to bear

in mind is not to postpone removal in spring until brood is being reared, as this may suffer in consequence. Our own choice of time for removal would be about the middle of February, so that the bees would soon have a chance of flying abroad in their new quarters and catch the effect of the early pollen, which would stimulate breeding and prosperity.—EDS.]

THE SALE OF HONEY.

[6071.] Referring to the question of selling honey, now rather prominent in the B.B.J., may I give my experience of prices? I get orders for about 2,000 lb. of honey each season, and of this I produce about 1,000 lb., and have to buy the rest. I could considerably increase my sales, but it s hardly worth the trouble, if one has to pay 6d. per lb. for honey in bulk. It must be borne in mind, that after buying in bulk, I have to liquefy the honey, supply glass jars to run it into, and label the latter (there are always broken jars, which adds to the cost). Then comes providing packing cases, and the very careful packing which honey needs, followed by an average cost of 1d. per lb. for carriage to customers. My average price to customers is 10d. per 1-lb. jar delivered free. I have, in addition, had one or two small bad debts. So, after taking all these things into account, there is not much profit left. I consider 5d. per lb. in bulk is a fair price, seeing that cost of jar, package, and carriage is 3d., so it only leaves 2d. per jar for all the labour I have mentioned. On the other hand, all the producer has to do for his 5d. is to extract and run the honey into a tin, and he gets his cash with order. What I would like to suggest is for bee-keepers to combine and buy honey-jars in large quantities, thus considerably lessening the cost. When I ask a shilling per jar for my honey, customers tell me they can get it at 8d. or 9d. a lb. anywhere, and have no trouble of unpacking, etc., with the fear of a broken jar. — E. WHITFIELD, Alresford, Hants, October 20.

SWALLOWS AND BEES.

[6072.] I was a bit surprised to read G. M. Coles's letter (6034, page 384), stating that swallows are in the habit of feeding their young on drones. All I can say is, if the statement is true, Mr. Coles must have good eyes for him to see the bees in the bird's bills, because you can never see the food they carry to their young. The natural way in which a swallow catches insects in the air is to fly with its mouth open, and when a fly is once inside, it cannot escape because of the bird's mouth being lined with a sticky, adhesive substance on which the flies are held exactly as on a "fly-paper." I shot several swallows one year, and the insides of their mouths were covered with small flies and other tiny insects. My own opinion is that neither swifts, swallows, house-martins, nor sand-martins ever touch bees; if they did they would be more often seen flying around the apiary when they reach our shores in early spring, or late in autumn when small flies and other little insects are rather scarce.—J. SKINNER, Easton, Bristol.

"TANGING" BEES.

[6073.] Perhaps the following extract from a letter written in Angola, Portuguese West Africa, may interest some of your readers, as bearing on the subject of "tanging" bees. We are told that it is an old wives' fable to suppose that it has anything to do with making the bees settle, and is in reality the survival of an ancient custom to inform the neighbours that there is a swarm on the wing; but this is what the natives of Central Africa are doing to this day:—"A number of swarms of bees are overhead to-day. Their hum can be heard a long distance. The natives have hives ready placed in the topmost branches of prominent trees, and try to attract the swarms to them by firing guns, beating drums, and yelling. Distant fusillades are echoing on all sides, and I have no doubt the swarms are responsible for them."

I may add that wild bees are apparently common in the district, for the writer has at other times mentioned the merry little honey bird ("chirripe," as the natives call it) as being their constant companion.—J. B. H., Clifton-on-Teme, Worcester, October 23.

Queries and Replies.

[3938.] *Dealing with Suspected Stocks.*—Thank you very much for reply to my query (3921, page 407). I was greatly surprised to find that there was any doubt (and am pleased to understand there is) about the hive referred to being affected by foul brood. At the time of burning the comb, I thought that the bad-smelling syrupy substance was conclusive evidence of foul brood, and, therefore, did not think it necessary to mention other noticeable points—viz., that the cappings of some brood-cells were punctured and the comb had an untidy appearance, as if cappings had fallen into the cells and had not been cleared away. I also found a pupa on the flight-board on October 21. Owing to the weather being unsuitable for opening hives

I am unable to send you a piece of comb, and should be pleased if you could, from data now in your possession, say:—1. Is any further protection from the weather advisable? 2. Will it be right to leave No. 2 hive in its present position, which is in a hollow and close to a stream infested by water rats, or should it be moved near to No. 1 hive, which is the position I should like it to occupy next year? 3. Do rats ever try to enter hives? 4. I have, of course, read the chapter in the "Guide Book" on foul brood. Is it desirable for me to read any other book on that particular subject?—W. E. B., Manchester, October 21.

REPLY. — 1. The protection mentioned on page 407 will be ample. 2. We should move the hive to the desired position some time during the winter, after the bees have been kept in their hive for a few weeks by cold weather. 3. Never to our knowledge. 4. The "Guide Book" contains all the information needed for dealing with the disease.

[3939.] *A Beginner's Queries.*—As a beginner, and a reader of your two papers, may I ask for a little information? This is my first year at bee-keeping, and so forms my excuse for putting very elementary questions. I have only two hives, and all through the past summer my bees would not work through excluder zinc, and it took me till the middle of August to find it out. My first question is:—When working for extracted honey with shallow-frames, do you use excluder zinc below them? 2. I have bought drone-base foundation for the shallow-frames, thinking there would be less comb-building by so doing, but if excluder zinc is not to be used shall I have to replace the foundation with that for worker-cell? 3. Without excluder zinc shall I get brood in the shallow-frames, and, on that account, would the surplus chambers have to remain on until late in the season in order to allow all brood to hatch out? 4. I have heard of a bee-keeper who looks through the brood-nests of his hives once a week in the season with the object of cutting out queen-cells to prevent swarming. Do you consider that the correct thing to do? 5. Is borage a very good bee-plant, and worth sowing in a garden near to the hives? Reply in the B.B.J. will oblige.—J. P., Bolton-le-Moors, Lancs, October 21.

REPLY.—1. Yes, invariably, as nearly all bee-keepers do when working for extracted honey. We can hear of some, who, after putting on excluders, if the bees of any hive appear reluctant to enter supers owing to the excluder, will remove the latter for a few hours, till the bees take possession, and then replace it: but, before doing this, the frames in brood-nest must be examined to make sure the queen is there. 2. Reply to No. 1 disposes of this query. 3. You will almost, certainly, and thus transform the surplus-box into a brood-chamber. 4. The bee-keeper who acts like your friend will considerably lessen his honey harvest by the weekly disturbance; and, on that account, it is a plan no large honey-producer would be likely to follow. The less brood-chambers are disturbed during the honey-gathering season the better. 5. Borage yields very well, though the honey from it is not of the highest class. If you have room for a bed ten yards, or more, long by two wide, the bees will make it more than pay cost of seed and labour. Bees also work on it in showery weather as the flowers hang face down.

[3940.] *Feeding Bees in Skeps.*—I have been keeping bees and taking the B.B.J. for the last nine months, and should be obliged if you would help me in the following circumstances:—I am on the point of buying six skeps of bees, supposed to contained sufficient food for the winter, but my intention is to fix on each skep a "rapid-feeder" box, and instead of giving syrup food, as the season is so late, to fill the feeders with pure Jamaica honey (granulated) bought in barrels. I therefore ask: — 1. Do you recommend this plan? 2. If you approve, should I medicate the food so given with naphthol beta, stirred into the honey after the latter has been liquefied by heating, but not brought to boiling point? 3. Would the honey mentioned be likely to cause foul brood in my hives, which are at present free from disease? 4. What should be a fair gross weight of a skep filled with bees and sufficient winter stores at this season? I am joining the Devon Bee-keepers' Association in January. Thanking you in anticipation, I send name for reference, while signing—FRANCIS, St. Marychurch, Devon, October 21.

REPLY.—1. We should not advise giving liquid food at this late season, with severe night frosts prevailing. If the bees really require more stores, give good soft candy made from refined cane-sugar, either in crystals or loaf. 2. You can only with advantage add naphthol beta to syrup-food when made as directed in "Guide Book." 3. If honey comes from diseased hives it will infect all stocks that partake of it. 4. If the skeps weigh from 25 to 30 lb. gross, they may be regarded as safe from famine till March next.

[3941.] *Removing Bees from Roof by a Beginner.*—I only began bee-keeping this year, never having had anything to do with bees before, and my first job at the work was taking a stray swarm from the roof above the saddle-room at the place where I am

employed on August 9. The swarm in question had gone into the roof in May last. Having had no experience whatever of such a task as was before me, I hardly knew how to begin, but I got a frame-hive, also some comb-foundation, and somehow managed to get the bees from roof and into the hive. This done, I started to feed them with sugar-syrup, and in this way gave them about 18 lb. of sugar. Will it be enough stores to last the bees all winter? Could you give me a recipe for making bee-candy through the B.B.J.? and oblige—A BEGINNER, Durham, October 9.

REPLY.—As the bees will no doubt have had to build out combs in the new hive, the quantity of sugar given will hardly suffice for winter stores. You should, therefore, give the stock a cake of soft candy weighing 3 lb. or 4 lb. In view of future work with bees you will do well to procure a copy of the "Guide Book," in which will be found full directions for making candy. You have done exceptionally well to manage so difficult a task as is mentioned above, unless help has been rendered by an experienced bee-man.

[3942.] *Bee-keeping in New Zealand.* — I should be glad if you or any readers of B.B.J. could inform me regarding bee-culture in New Zealand, whether there is any bee-keepers' association established in the colony, and, if so, the headquarters of such? I hope to sail for the above island on November 30, and should be glad of any information I can get. Thanking you in anticipation. — GEO. ARNOLD, Wolverton Road, W.

REPLY. — There is no B.K.A. in New Zealand, nor do we think the craft has any organisation for assisting bee-keepers, judging from an article in the *Australian Bee Bulletin*, wherein we read of a consignment of good honey shipped to London for sale, which only realised to the producer about 2d. per lb., after deducting all charges. The same honey would, it is stated, have realised 3½d. per lb., if sold in the colony.

[3943.] *Bee-keeping in Suburbs of London.* —I live in an ordinary terrace villa, having a fifty-feet garden, at East Finchley, which is in close proximity to Hampstead Heath, and would like to know—1. Whether I might hope to keep a hive or two of bees with success? Is the Heath and surrounding country rich enough in bee-forage? 2. Would the hanging out of clothes on the domestic washing day interfere with the bees, and would the presence of a hive make it dangerous for my little girl to play in the garden? 3. If these difficulties are not insuperable, will you favour me with your advice as to the kind of hive to get—I should want to avoid swarming as much as possible—and the best position for it in the garden (of which I enclose a sketch for your guidance), and also as to the breed of bees that would suit my purpose best? I have read the "Guide Book," and think of starting in February or March next with a stock. Any advice will be greatly appreciated by — G. E. H., East Finchley, October 23.

REPLY.—1. East Finchley is fairly good as regards bee-forage for a suburban district, but bees cannot be expected to do more than keep themselves, and yield a very moderate amount of surplus honey. 2. The hanging out of clothes to dry will not interfere much with the bees, but we cannot say the same for the "domestic washing," unless the clothes-lines hang out of the line of the bees' flight. The same may be said of danger to children if allowed to play near the hives, the chances are that the little ones will be forcibly reminded to keep out of danger. 3. Judging from the very neat sketch sent the position marked No. 2 seems most suitable if the hive is placed on the lawn, with entrance facing the flower-border. It would need to be about 6 or 8 feet from the tall fence, and if the ground beyond the latter is open country the bees would be far less troublesome on that account. If the 4 ft. fence only divides your garden from that of a neighbour the bees should not be placed in position 1.

Echoes from the Hives.

Bishop's Waltham, October 23. — My takings this season have totalled 282 lb. from eight hives all section honey. The individual yields vary between 21 lb. and 53 lb. The result is not up to the average for this district, and I put down the shortage to the dry weather experienced during a great portion of the honey season. The early takings from the sainfoin were, as usual, excellent in quality, but honey dew was much in evidence during July, and spoilt more than the average number of sections. All my stocks are in a healthy condition, and I have heard of no case of foul brood in the district.—A. ROYDS, jun.

Bee Shows to Come.

November 5 to 18, at Plymouth. — Annual Show of the Devon B.K.A., in conjunction with the Plymouth Exhibition. Twelve classes, with good prizes, for honey and bee appliances, including special prize of £1 1s., for two 1 lb. sections. Schedules from F. W. Palmer, Turner Cottage, St. Badeaux, Devonport. **Entries close November 1**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances. Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries close November 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immedately following the receipt of their communications.

MORNING STAR (Wolverhampton). — Old Bee-books.—We have the Rev. W. C. Cotton's work, "My Bee-book," published in 1842. It is interesting to students of bee-literature, but any work written over sixty years ago is, obviously, of no practical value to the bee-keeper of to-day who works on modern methods only.

KARNO (Erdington). — Keeping Foreign Queens over Winter.—It would be next to impossible to keep queens all through the winter in the small boxes used for sending them over to this country. The only plan of using a queen so sent would be to introduce to a fairly strong nucleus, and use great care in keeping the latter as warm as possible.

A. W. FOOT (Hants).—Joining B.K. Associations.—For particulars of membership of the B.B.K.A., write to Mr. Edwin H. Young, sec., 12, Hanover Square, London.

BEE-HIVE (Yorks.).—1. Heather growing on hills admittedly yields better honey than that from lower ground, but there is no fixed height above sea-level to regulate quality by. 2. Many bee-keepers have poultry-runs near their hives, but it is not well to have the fowls running free among the hives. 3. Foundation is fixed to frames having no saw-cut in top-bars by running molten wax along the foundation.

A. F. D. (Coventry).—Re-queening Stocks in October.—If you can purchase a fertile queen and have her sent in a box with two or three dozen bees to keep her warm, there is no reason why your "powerful colony" should remain queenless; but more care will be necessary in introducing the stranger at this season. We should protect the queen by using the American cage shown on page 131 of the "Guide Book."

"ARDRUADH" (Argyllshire). — Sugar for Candy-making.—1. Sample is no doubt pure cane, but, being a moist sugar, is not suitable for making bee-candy. For this, either refined white crystals or else loaf sugar only should be used. 2. Sample of candy sent is far too hard, and not at all "buttery" or smooth in grain, as it should be. 3. The piece of comb forwarded is quite free from disease, and, in fact, contains nothing but fresh-gathered pollen.

W. P. (Blaydon-on-Tyne).—Buying Driven Bees.—There is no reason for suspecting foul brood in driven bees because of the peculiar smell you noticed, which "smell" may have arisen from the box the bees were sent in. We advise you to deal with the bees as being healthy.

NOVICE (Badsey).—Over-dosing Bee-candy. —As you used 12 lb. of sugar instead of 10 lb. in making the candy, we do not think any harm to the bees will follow your adding the extra tablespoonful of N.B. solution, though it will destroy the efficacy of the remedy.

J. D. (Wolverhampton).—Bee Nomenclature.—1. The bees sent have a trace of foreign blood in them, as have nearly all the common or native bees in this country. 2. You must not decide against the newly imported Carniolan queen till her progeny of next year show themselves on the wing next season.

G. MAY (Surrey).—Bees Building Comb in Feeder-box.—1. It is quite a common occurrence for bees to build comb in feeder-boxes, particularly in early spring, when a box of candy is put over a strong stock. If you pass a fine wire between the feeder-box and the hole in quilt, the feeder may then be removed, comb and all, with very little trouble. 2. The "abundance of drones" in the other stock mentioned points to queenlessness.

W. B. CUNRO (Notts).—Chapman Honey Plant.—The seedlings raised in box out of doors from seed sown in August should have been planted out at end of September, but they will take no harm if left in box and slightly protected from keen frost.

Honey Samples.

W. E. W. (Sydenham).—1. Sample of granulated honey sent is, in our opinion, not of this season's gathering. 2. The quality is good, and is, we think, almost entirely from white clover, but whether gathered in England or not is more than we can say.

H. WOODWARD (Cambs.).—Your sample exactly corresponds to the above.

T. L. (Southport).—Sample is mainly from white clover, and would be a good table honey but it is beginning to granulate, and also shows signs of fermentation having started. When in good condition it might have done for a local show, but is not up to show-bench standard in open competition.

T. L. (Southport).—We fear your sample has been lost in post. One label has reached us marked "Found unattached in W.C. Dist. Office," but this is dated August 29 and the postmark is "Shenstone," so it cannot be yours.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

EXAMINATIONS FOR SECOND-CLASS CERTIFICATES.

We have been requested to notify candidates for the second-class certificate of the B.B.KA. regarding the exams., which will be held at various centres on November 17 and 18, that arrangements should be made without delay, for fixing places where the several examinations will take place. It will also be needful for the hon. secs. of county associations, whose members are coming forward to have properly qualified gentlemen appointed to act as superintendents, or supervisors, while the paper-work (of which the exam. wholly consists) is being got through.

It is, of course, more convenient when several candidates can arrange to meet at a given centre, so that one superintendent will suffice for the whole. On the other hand, when there are only one or two candidates for examination in one locality, it may take place at the residence of the superintendent, or wherever most convenient.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

QUEENS CEASING LAYING.

[6074.] Many bee-keepers on examining hives during September wonder that some of their queens have ceased ovipositing, and at times rashly come to the conclusion that some accident has befallen her majesty or that they have an unfertilised queen at the head of their stock. Perhaps as a result of a hunt they even fail to find her, and erroneously conclude that the hive is queenless. They have been looking over the frames for the large and stately lady, easily seen some weeks earlier, oblivious of the fact that she is not there, because, since the cessation of rapid egg-laying, she has not received a tithe of the stimulation she then obtained. Consequently, though the same queen is present, she is very considerably reduced in size and may therefore be easily missed in a cursory examination. This holds good all through winter, but on the approach of spring rapid breeding needs rapid feeding, so she again increases in size and is more easily spotted. Once she begins laying, unless there is a cessation of income, she keeps up a regular and uninterrupted course of ovipositing throughout the season, unless she is aged and failing, or has met with any injury. The rule, as I wish to emphasise, is that young queens lay right on, keeping up a regular line of succession, so that bees of all ages are found in the colony. Two exceptions to this universal rule came under my notice this season, and both are so peculiar that I should like to bring them under the notice of bee-keepers, in order that we may learn if they are really exceptional.

A colony of hybrid Carniolans, as they were described in the advertising columns of the JOURNAL, were obtained on ten frames early in June. On arrival the frames were transferred, showing plenty of brood and bees. Very few were dead, although they took a considerable time en route. Being strong, they were soon supered in the expectation that they would ascend, but they did not, and even seemed to dwindle a bit. On being called in, I made an examination, when, on glancing over the frames, no eggs were seen and no unsealed larvæ, every uncapped cell being nearly full of recently gathered honey. An accident to the queen when transferring was suspected, and the owner proposed to send off for one at once. In the cursory glance given to frames, however, I had observed one or two small patches in the centre, dry. This gave me a hint, and I determined to examine if there was a queen. Every frame was overhauled in a fruitless search for her, when, on replacing the last frame, a fine and shapely mother bee was discovered looking very well indeed. The hive was closed up without any more thought of supersedure, and sure enough she merited the trust imposed in her by immediately starting to lay, and keeping it up well all through the season. Now the question arises, why should a queen, doing good work in May and earlier, suddenly cease ovipositing for a period of over a fortnight at least, and then start again as if nothing had happend in the meantime? The short period of confinement during transit scarcely accounts for it, because, although it might perhaps lessen her egg-laying powers slightly, it should not cause a complete cessation for a lengthy period as befel in this case.

The other example is that of a golden virgin, obtained from England in July, which mated all right after some little time and started laying. When I saw them, well on in August, they showed a large proportion of the crossed yellow bees and the frames contained a considerable quantity of sealed brood, many bees hatching out as we examined them, but no single

egg was discovered, even after a very patient second hunt, and scarcely any unsealed larvæ. No egg, indeed, had been laid in that hive for fully a week. Here was an enigma! Why did that active and prolific young mother suddenly stop laying? She looked so sound that sentence of death was not imposed, and her owner determined to give her a week's grace before acting summarily if necessity demanded. Though not large she looked a nice, shapely queen, and to all appearance was correct in every way. Some time after he wrote me that she had again started active work and showed several frames of compact brood, thus saving her life. He then asked me the question if I had ever met a similar case, and hence this contribution.

Well, I have met somewhat analogous cases of queens during a dearth between the clover and the heather flow, or just after the cessation of the latter if weather suddenly chilled severely, who very greatly contracted their egg-laying, and then recommenced as actively as ever when weather or other conditions became more propitious; but I never met with any cases of a complete stoppage wholly similar to the two I have recorded above. Any question of injury to the queens need not be taken into consideration, I think, so that the riddle becomes rather an interesting, if not inexplicable, one, even bearing in mind the often quoted fact that "bees do nothing invariably." Would I be safe in asserting that black queens would not act in this fickle and most mysterious manner? It will be noted that of the two, one was a Carniolan hybrid, and the other an Italian hybrid. It might perhaps be set down to "Scotch prejudice" if I ascribed their peculiar conduct to this fact, so I forbear. — D. M. M., Banff.

PREVENTING SWARMING.

[6075.] Replying to the request of your correspondent, "W. C. H., South Devon" (6058, page 406), may I say that in writing, as stated, for the encouragement of those who are, or would be, suburban bee-keepers, and knowing that stings and swarms are amongst the several obstacles to the increase of good bee-keepers, I merely mentioned the fact that I had not had a single swarm for the six years I had been keeping bees in a suburban garden. I do not take credit for good management, but rather attribute it to good fortune. I started with one swarm which, by division and sub-division, I increased to three, the fourth being a purchased lot. I always super early with shallow-frames; my bees are in a shady place, and are evidently not so intent upon swarming as some are. A friend, whose bees are in a similar position to my own, but exposed to the sun at all times, has suffered much from excessive swarming, although he supers as early as I do. Possibly now that my apiary contains as many hives as I can do with, my experience may change, but I shall continue to super early.

As I am writing, and if your space permits, may I revert to my note (6016, page 367) on "Earwigs Emptying Supers," to which bees had no access, and to the honest doubts of several correspondents regarding the accuracy of my statement on the subject? It may sound like another fairy tale, but it is no less true that in the neighbourhood I refer to there is a locality which was at one time known as "earwig corner," so named from the fact that the earwigs took possession of a street lamp in such numbers that the light was completely obscured. Our county secretary who used to keep bees in the locality, writes me: "I remember seeing more of them (earwigs) in a hive of mine than bees! Fact! The empty combs were choked up with them." I am told that this plague of earwigs was brought over in the foreign timber (doors, window-sashes, and grooved and tongued flooring) which was "dumped down" in the vicinity for the erection of thousands of houses on the estates of Mr. Cameron Corbett, M.P.

With apologies for occupying so much of your space.—Geo. S. Faunch, Ilford.

BEES AND LIME TREES.

TILIA PETIOLARIS.

[6076.] The following answer to a correspondent in *The Countryside* is found in the issue for October 21:—

[Extract.]

"In all probability the lime trees under which your correspondent found dead bees were not the common species, Tilia Europœa, but Tilia petiolaris, L. C. Prodronius, Vol. 1, p. 514, figured in Bot. Mag., 6,737, supposed to be a native of the Crimea. Whenever I have come across this species in blossom I have invariably found hundreds of bees dead and dying underneath, and watched them fall from the flowers as though paralysed.—Fred. Enock, F.L.S., Bexley, Kent."

In view of what is stated above, I am inclined to ask: Are the bees in question only drunk from the effects of the powerful nectar gathered from the lime mentioned (Tilia petiolaris), or are they really "dead and dying" as described?—H. R. N. Ellison, Ashford, Kent, October 22.

[We rather think that many of our readers will differ from the conclusion arrived at by Mr. Enock with regard to the lime mentioned in the extract (Tilia

petiolaris). There was a long and interesting discussion in our pages some time ago in connection with the nomenclature of the late-flowering lime, T. petiolaris, and had any of the disastrous effects upon bee-life mentioned been traceable to the blossom of that tree we should have heard of it.—EDS.]

TALL VERSUS SQUARE SECTIONS.

[6077.] In spite of the views of several prominent bee-keepers, such as Mr. W. Woodley, whose greater age and experience lend more weight to their opinions than my own with regard to the "new-fangled" tall sections, I think we have good reason for predicting that tall sections will eventually replace the old-fashioned square variety, even in conservative England.

For two seasons (1903 and 1904) I have used tall sections side by side, so to speak, with square, and I emphatically say that my only reason for continuing to use the latter at all is because I have a stock of them on hand which economy compels me to use up. Hence the object of this article—viz., to set forth as fairly as I can the *pros* and *cons* of the two kinds of sections.

I must explain first of all that in the following discussion I refer all through to 5 in. by 4 in. by $1\frac{3}{8}$ in., used with "Gray's section frames," on the one hand, and $4\frac{1}{4}$ in. by $4\frac{1}{4}$ in. by 2 in. on the other.

The following are my arguments in favour of tall sections, based on my own experience:—

1. Let us suppose you are just starting bee-keeping. After purchasing the necessary bees, hives, etc., one of the first things to be considered is whether to work for comb-honey only, or entirely for extracted, or both; and, if both, what proportion of each? We must then decide on the number of section-racks and extracting supers to order. But the first season has to be gone through before even an approximate estimate can be made of how your honey sales will work out. Besides, it is always good policy to produce as much extracted honey as you can sell, as it undoubtedly pays better than comb. It is quite obvious that exchange of supers will entail some loss, even if you are lucky in selling or exchanging, for there will be carriage, etc., to pay. And here comes the advantage of the tall sections, for the section-frames mentioned above can be used both for comb and extracted honey, provided, of course, that the frames are of the ordinary "shallow" size.

2. When the honey-flow comes along, you wish to put on sections. The tall-section super fits exactly on top of an ordinary frame-hive taking the standard frame; the ordinary square section-rack does not, the result being that you have to pack the latter in order to prevent bees from coming up between the super and the outer casing. This entails extra work.

3. Every bee-keeper knows it is easier to coax bees into a super of shallow-frames than into a box of sections, and here comes in another advantage in using the tall sections, for a super made of them is more like a super of shallow-frames than a section-rack is, the comb surface being very nearly flush with the edge of the sections, thus making an almost unbroken surface from end to end, and allowing the heat of the brood-nest to pass up into the super, as well as causing the bees no obstruction. The bees also have passage-way from one section to another without any interference. True, the actual difference in practice with regard to the bees' willingness to enter supers between section-frames and square sections may be small, but I am convinced there is some, and every little counts.

4. When the bees have settled down to work in the supers it is found in practice that the centre sections are filled out more quickly and more perfectly than those at the side. Here, again, the tall section scores, for not only can either shallow-frames or section-frames be used in the same super, but both can be used at the same time; and you gain another point over your square-section neighbour, for you can produce 90 to 100 per cent. of first grade sections, instead of, say, 30 to 50 per cent. first grade and the rest second and third grade. For the section-producer this is an important item, because of the extra value of the better grades, and you thus get more cash for the same weight of honey produced; especially is this the case with the big bee-men, whose success depends largely upon reputation and advertisement. It should also be remembered that one has to wait longer for the sections to be sealed than when the super is half filled with frames and half with sections.

5. Even when only sections are placed in a super, I have invariably found that tall sections have fewer pop-holes than square ones, owing no doubt to the fact that there is no break in the surface of three sections in a frame.

6. Bees build less brace-comb with section-frames than in the old-fashioned section-racks. Why, I cannot explain; but my experience has convinced me that it is so. In fact, I may say that I have never yet taken off a rack without finding at least one section made unsaleable, owing to its being built to the dividers. Yet I have not had a single tall section mutilated in this way. Perhaps others have succeeded better; but the fact remains that I have much less trouble in this respect with the new section than with the old.

7. It is well known that bees use less propolis with sections in frames than in an ordinary rack. This means less cleaning

and scraping of sections; not only so, but the dividers have scarcely any propolis on them.

8. If a customer happens to want a few sections for a special purpose before yours are ready for removal, all you have to do is to take out a frame of completed sections and replace it by an empty one, almost without any disturbance.

9. Tall sections take up less room than square ones. A 5 in. by 4 in. by $1\frac{3}{8}$ in. section, glazed both sides, occupies a space of 30 cubic inches, whereas a $4\frac{1}{4}$ in. by $4\frac{1}{4}$ in. by 2 in. occupies just over $38\frac{1}{3}$ cubic inches. Apart from the actual size of the article, I think that the shape of a tall section offers more convenience in packing than a square one.

10. All but the most perfect specimens of comb-honey have a better appearance on the show-bench, or in the shop window, when built in tall sections than when built in square ones, for the law being the same for both with regard to the maximum width of lace paper used in glazing, and the glass covering the former being considerably closer to the comb surface than that which covers the latter, the pop-holes are more effectually hidden by the lace paper in the former than the latter. This requires no further explanation.

Disadvantages of Tall Sections.

1. A fresh supply of fixtures is required when changing, the old section-racks becoming practically useless. This should not be forgotten.

2. If the comb in 5 in. by 4 in. section is not built perfectly straight, owing to the sections not being put straight in the frames, there will be a slight difficulty in glazing, owing to the comb projecting beyond the wood. (This difficulty I have found to be small.)

3. A slightly larger quantity of foundation is required for same number of sections. (The proportion is about 10:9.)

4. More wax required by bees in capping sections in proportion of 10:9.

5. More glass required for glazing, for reasons given in 3 and 4.

6. The difficulty (at present) of getting a section-case for tall sections. Consequently, there is no alternative but to glaze with paper and glass specially cut to correct size.

The question as to which section looks the best, all other things being equal, is a disputed one, and one for your customers to answer. For my part, I think that the tall shape has a better appearance than the perfect square.

All the above points should be considered when deciding which sections to use, as well as any other which I may have overlooked or not observed.—STANLEY WRIGHT, Macclesfield.

SWALLOWS AND BEES.

[6078.] I notice on page 427 of last week's B.B.J., that Mr. J. Skinner questions the accuracy of my statement to Mr. W. H. Harris, wherein I mention that swallows feed their young ones on drones. Mr. Skinner says:—"If the statement is true, Mr. Coles must have good eyes to see the bees in the birds' bills, because you can never see the food they carry to their young." I now beg to say the words used by me were perfectly true; and, so far as confirming the clearness of my vision, I may also add that not only myself, but five other persons saw the drones in the birds' bills as they sat on the clothes-line, mentioned in my letter, before going to their young, for they held the bees across the middle. Therefore, whatever Mr. Skinner may think, I trust your readers will have faith in my statement, which was not a random one, and also that I do not suffer from optical delusions.—GEO. M. COLES, October 30.

BEE-KEEPING IN NEW ZEALAND.

[6079.] I am able to inform Mr. George Arnold, whose query appears on page 429, that there are several bee-keepers' associations throughout New Zealand, and more are in course of being formed. Not only so, but the Government of the colony has appointed an expert in the person of Mr. Isaac Hopkins, a well-known name in apiculture over there. He is touring all over the colony, visiting apiaries and delivering lectures. Last summer proved an excellent honey season, and several bee-keepers had heavy "takes," which they sold at about 3*l.* per lb. in small lots, and 2d. per lb. in 60 lb. tins; 1-lb. sections gave double that figure. If Mr. Arnold communicates with Mr. Hopkins, or Mr. Small, Marton, New Zealand, they might supply him with additional information.—D. M. M., Banff.

(*Correspondence continued on page* 436.)

HOMES OF THE HONEY BEE.

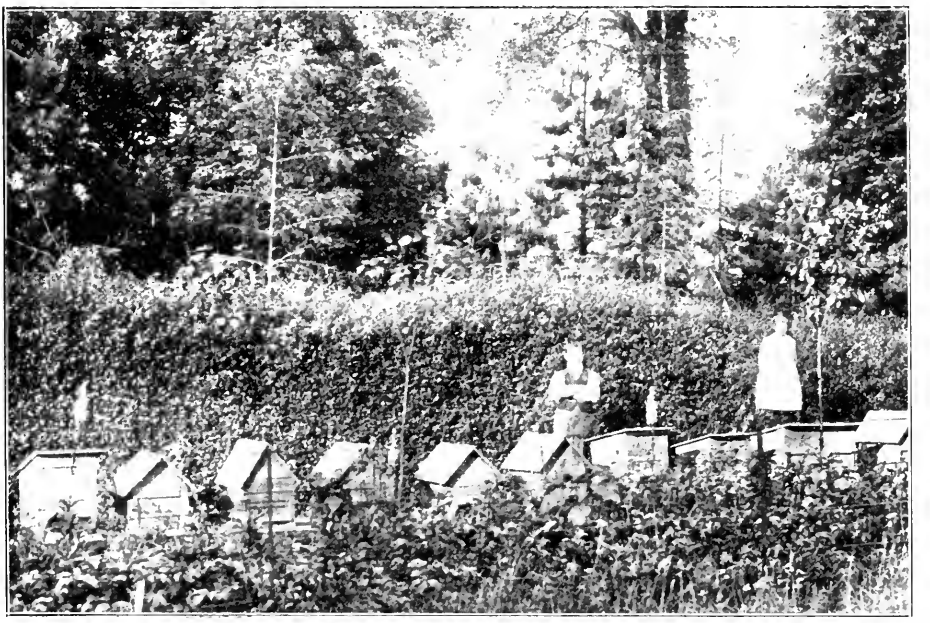
THE APIARIES OF OUR READERS.

The bee-garden seen on opposite page shows another of our readers who will be welcomed by the craft generally as a gardener who is also a good bee-man. Too many of those who have charge of gardens in which a few hives are kept, are apt to regard the bees as a nuisance, and do their best to get rid of them; but Mr. Watson writes of himself as follows:—

"As requested, I have pleasure in sending a few notes of my bee-keeping experiences. In June, 1897, a stray swarm clustered in a hedge close to where I then lived, and the idea occurred to me of capturing them if I could. Of course, the first thing needed was a hive, and this was not avail-

able; but, being a gardener, I chanced to have by me a 'Sutton's-seed box,' into which I managed to get the bees.

"Then came the trouble of knowing what to do with my capture. This led me to seek the advice of a bee-keeper living near by, who was owner of thirty hives, and he good-naturedly invited me to call at his place and see him at work among the bees. This I gladly did, and soon saw the advantage of the frame-hive over the straw skep, and having realised this, I set to work making one, taking my friend's hives as a pattern to work by, and managed it fairly well. Anyway all the hives seen in photo take the standard frame and were made by myself from used boxes of various kinds. My first move after getting a frame-hive was to inquire of our local newsagent if he had any bee papers, and he told me about the B.B.J. I ordered a copy and have taken it regularly ever since. I next got a 'Guide Book,' read it, and, having done this, soon found myself on the road to success. I at once turned my attention to increasing my stocks by swarms and by driving condemned bees from skeps; thus saving them from the sulphur-pit. In this way I soon possessed a dozen frame-hives, which I consider about enough for me to look after at home, as I like to have a bit of spare time to look round the apiaries of bee keepers like myself, and thus gain a little experience, or to give a little advice as the case requires. Up to the present I have worked almost entirely for sections, but am thinking of going in for shallow-frames and extracted honey, as I think that pays in the long run best. The price of honey in this district is very low, being cut down chiefly by those who own a very large number of stocks, and not by the small bee-keepers as is often stated by correspondents in the BEE JOURNAL. With me, bee-keeping is a hobby in the first place, nevertheless I always manage to make the balance show on the right side when reckoning time comes. I believe in spring feeding for stimulating, feeling sure that it assists in getting stocks very strong and ready for the honey-flow. I also give plenty of room in advance of the bees' requirements, so as to prevent swarming, and how well this answers is shown by my having only had one in three years, and that was in 1903, which was the best season I have ever had.



MR. R. WATSON'S APIARY, HERMITAGE LODGE, HITCHIN, HERTS.

"The present year was not one of the best in this district, my strongest hive barely yielding 50 lb. of surplus honey. I intend to try my hand at queen-raising, with the object of re-queening all stocks in the autumn. It seems true that we can only hope for the best result by keeping a young queen at the head of our stocks. My young daughter—seen on my left side in photo—is always ready to help me in every way when working among the bees. We have from 250 to 300 colonies of bees kept in and around Hitchin, and an expert in our midst, but I am sorry to say no meetings are held for the benefit of the craft."

CORRESPONDENCE.

(*Continued from page* 434.)

BRITISH *V.* FOREIGN HONEY.

[6080.] I notice the remarks of Mr. Reid, on page 423, B.B.J., October 26, with regard to foreign honey being sold as British. I am glad this was mentioned, as it settles a point in my own mind that I was not quite certain about.

A little while ago I called at a large grocer and provision merchant's shop (name enclosed). The manager, on my offering honey for sale, replied that they bought honey in bulk and bottled it themselves; whereupon I offered him a cwt. or more in bulk at 7d. per lb. He shook his head in a very decisive manner, and said, "The truth is, we get New Zealand honey at 4d. per lb., and sell it as *British*, which, of course, is right enough, you know." Of course, I declined to come down to that price.

I think that British bee-keepers should be a bit jealous of their brethren "down under," and "hold forth," if needs be, on the purity and quality of the home-grown honey they have to offer. A printed label would be useful in this direction, I think, guaranteeing to buyers that "this honey is not foreign honey sold as 'British.'" If retailers are unscrupulous, we should endeavour to bring it out to the light of honesty. I send name for reference and sign—HANTS BEE.

THE SALE OF HONEY.

[6081.] Your correspondent "E. Whitfield" (6071, page 427) is not only a bee-keeper but apparently occupies the position of a honey merchant, who buys in bulk to sell again to the retail trade. No doubt 5d. per lb. is, under ordinary circumstances, as much as he can afford to give. What I am contending for, however, is that, unless to such *bonâ fide* honey merchants, bee-keepers should not lower their price. Men like Mr. Whitfield, no doubt, serve a useful purpose to such bee-keepers as cannot themselves find a direct market. The evil we complain of is, that some bee-keepers sell direct to the retailer at 45s. per cwt., and thus do an injury to all other bee-keepers, including such men as Mr. Whitfield himself. I have reckoned everything up very carefully, and find that taking into consideration the expense of foul brood prevention, the wear and tear of stock, bad years for honey-yield, and the labour and time involved, that a bee-keeper needs an average price of at least 6d. per lb. for extracted honey to realise a very moderate rate of profit. He has to wait a whole year for his harvest, and thus turns his money over much less frequently than is done in businesses which have a weekly production and turnover. I therefore say that, viewed from this standpoint, bee-keeping is less profitable than most trades, while the risk is very great as regards seasons and health of live stock. —BUSINESS, Cornwall, October 28.

A BEE-NOTE FROM ARGYLLSHIRE.

[6082.] I beg to thank you for the prompt reply to my query *re* over-medicated bee-candy and to say that your advice to remake the candy was followed and proved quite successful.

With regard to the honey harvest in this neighbourhood, it has been generally disappointing, the average "take" not exceeding 12 lb. per hive, all of which was gathered by the black or native bees.

Personally, I have been more fortunate, as from four stocks of Italian bees I have secured close on 200 lb., or an average of 50 lb. per hive, and have on hand besides eighty drawn-out sections. They will be a useful asset for next season, the bees having cleaned them out for me.

We have had beautiful weather here for the last fortnight, with bees flying freely in the bright sunshine and gathering some honey from the ivy blossom, although during the nights there was from ten to fourteen degrees frost.—MEDICUS, Gourock, N.B., October 26.

BEES AND NON-TECHNICAL PAPERS.

[6083.]—If you wish to hold your position as an authority on bees, you must look to your laurels. A contemporary devoted to country pursuits informed its readers on September 9 last that "hive-bees do not visit lavender." The following week the same authority stated that "ants entering hives is an unheard-of thing in England"!

Although I took trouble to point out these mistakes, the editors of the paper referred to have thought it well to take no notice of my letter, preferring to allow such ridiculous statements to stand uncorrected. In the third week's issue the enclosed article appears, headed, "The Treatment of Bee and Wasp Stings." The writer surely must hold a brief for a firm of wholesale druggists. He omits to state that an operating table should always be kept handy.—T. K., Carshalton.

[It is beyond question that non-technical papers (no doubt unwittingly) often print statements about bees and bee-keeping which are misleading, and sometimes the very reverse of known facts. Any bee-keeper, of even limited experience, knows that honey bees work very hard on lavender and gather a considerable amount of honey from it where largely grown. Again, ants are so often troublesome to bee-keepers by entering hives and carrying off the bees'

stores, that in all good text-books the ant is classed among the "enemies of bees." The article on treatment of bee stings is too long for reproducing in full, but its usefulness to bee-keepers may be judged from the concluding paragraphs of the article, in which, after naming antidotes, or substances tending to neutralise the formic acid of the bee's sting, by the dozen, we are told to "procure one or other of the above substances," and after dissolving, "apply to the affected part any of these solutions on a piece of lint or soft cloth, and renew frequently." It then goes on to say: — "The pain may be further relieved by hot fermentations or hot poultices of linseed meal, camomile flowers, or, better still, onion." Further on we read: —

"The swelling is best combated by lead lotion, procurable at any chemist's, and applied freely on a thin piece of soft cloth, or any other evaporating lotion—e.g., spirit and water. In the absence of any of these, cloths dipped in cold water, or an ice-bag, may be applied.

"To overcome any faintness, let the patient lie down, undo all tight clothing, corsets, braces, etc., about the chest, and use smelling salts. Half a teaspoonful of sal volatile or other diffusible stimulant may be given about every hour or so in a tablespoonful or two of cold water until the faintness is removed. Cold water applied to the face and chest will also assist to remove the faintness, and so will plenty of fresh air."

No doubt the above would be useful to anyone quite ignorant of bee-keeping and nervously afraid of a sting, but had our advice been asked with regard to "treatment," we should be content to answer: — "Rub the sting out with finger-nail, and forget it."— EDS.]

BIRDS AND BEES.

FLASHLIGHT FOR SCARING BIRDS.

[6084.] Many thanks for answering my last questions in B.B.J. of 19th. I notice a lot of correspondence going on in our paper about birds destroying bees. I was myself much troubled with birds last year, but my cure for them now is to hang a piece of silvered glass hung on a stick near the hives so that the glass will swing and cause a flash when moved by the wind, provided the sun is shining. I have repeatedly noticed that when the glass is flashing in the sun not a bird is to be seen near my hives. I therefore think my plan is worth a trial to any in the craft who is pestered with birds.

Re my request in B.B.J. of 19th for seeds of Chapman honey plant, I have now got as much as will sow all my garden. Sorry I could not forward any more Canterbury bells, as I only had three dozen. I would like to thank through our paper Mr. J. Comley (Swindon) and Mr. H. Hazelwood (Ilminster) who sent me plants in return for those of the Canterbury Bells.—S. H., Aberfeldy, October 30.

Queries and Replies.

[3944.] *Clearing up Frames after Extracting.*—1. After extracting honey from frames, should the latter be returned to the bees to clear out all the honey left, and then carefully stored away to be returned to the bees next season, or should the empty combs be melted down every autumn for the wax, and the bees supplied with new foundations every spring? 2. Also, how often should brood-chambers be supplied with new foundations?—NOVICE, Loughborough, October 25.

REPLY.—1. Frames of comb, wet with honey after extracting, should be returned to the bees after sundown on same day for clearing up as stated. But the wet combs should not be given till after nightfall, as it causes much excitement in the hive to which the frames are returned, and if done while bees are flying, it will probably cause robbing to be started. 2. Combs, after being cleared up and dry, should be carefully stored and protected from moths. They are a valuable asset to the bee-keeper, and, if well cared for, may be used for years. 3. It is well to renew two or three frames of comb every year, by removing any that are either faulty or pollen-choked.

[3945.] *Queen Ceasing to Lay.* — I am sending you a live queen for inspection and your opinion under the following circumstances:—About a month ago I found the stock she headed less strong in bees than it should have been, seeing that it was two swarms united, one of which was a good top swarm. There was also a quantity of drones in hive and also drone-brood in worker-cells. I could not find a queen at the time, but I wrote to one of your advertisers (enclosing remittance) for a queen which has not turned up yet, although I have since written and sent a stamped addressed postcard for explanation; still no reply. So as it had gone so late, I thought it best to wait no longer but unite the stock with one of my others. This I did successfully the other day, after taking the precaution of removing queen first.

In the brood-nest I found both drone and worker-brood, and so what I want to know is:—1. Am I right in supposing that the queen sent is at fault? 2. Do you think she is a young one, and has she superseded an older one which was probably a drone-breeder? 3. Is she an old queen? I notice that her wings are a bit torn or

jagged at the tips. She appears to me to be rather small.—R. L., Point Lynas, N. Wales.

REPLY.—1. The queen was assuredly at fault. 2. She has all the appearance of an unmated queen. 3. We cannot think that the old one had been superseded. We add a line to say the advertiser you complain of is well known, and, so far as our knowledge goes, is a respectable and honest man.

[3946.] *Guaranteeing Bee-appliances.*—I should be glad if you would kindly reply in the B.B.J. to the following questions: 1. I ordered from one of the dealers who advertise in the above journal an extractor, stating I *must* have "Cowan's Rapid Extractor," similar to picture in Guide Book. He sent me the extractor, but nowhere has it got any notice of its being a "Cowan," nor is there any maker's name on it. I therefore ask: What guarantee have I when I sell it that it is a "Cowan Rapid Extractor." I find it too large, and want to get rid of it, but as it is not marked in any way, how will a purchaser know it is a "Cowan"? 2. I also bought from another of your advertisers an American smoker, price 6s., and asked particularly for a "Crane" or a "Corneil," adding that I would not buy an English-made smoker. The one sent has no mark on it whatever, or name to show by whom or where it was made. How am I to guarantee when I sell it that it a genuine American-made smoker. My Cowan "Guide Book" is an old one (fourteenth edition, thirtieth thousand). Has there been a new edition for 1905, and would it give me much more information? I find the "Guide Book" and B.B.J. of the greatest use. I enclose name, etc., for reference, and sign—POTSY, Weymouth, October 30.

REPLY.—1. It is not compulsory on appliance makers to mark goods with any identifying mark unless patented, and there is no patent "Cowan Extractor." If we had the name of maker of your "Cowan Rapid Extractor" it might help us in judging if it was right or not. 2. In the case of ordering a particular smoker made in America, you were entitled to have an American-made article, all which are distinctly labelled according to name. 3. The "Guide Book" has been improved and brought up to date since the fourteenth edition. The present edition is the eighteenth (fiftieth thousand).

[3947.] *Candy for Winter Food.*—Owing to an accident to my hand I have only lately been able to overhaul my bees, and find they are short of stores for winter. I have been feeding them, but now there is a frost every night. I fear that syrup-food may do them harm. I, therefore, propose to place about 10 lb. of soft candy over each hive. Will you kindly advise me if this is the best thing to do?—F. E. R., Ruabon, North Wales.

REPLY. — Soft candy is the only suitable food at this season; but we should not advise so much as 10 lb. in a single cake. In fact, if the candy is not well made, so that it will not become hard in a few weeks, the bees may perish of famine while the food is within reach. Have the candy put in boxes with glass top, and holding about 3lb. You may then be able to see how the food is taken without disturbing the bees at all, and when one box is finished a fresh supply of soft food can be given.

[3948.] *Elementary Queries.* — An answer to the following questions in the next issue of the B.B.J. will oblige:—1. Are the enclosed bees workers or drones? 2. What kind of bees are they? 3. Should I in any way injure the health of my bees by covering the entrance to the hive with wirecloth, to keep them from coming out on sunny mornings in winter? I found about eighty bees lying on the ground quite numbed by the cold, and when I warmed them up and put them on the alighting-board, the active bees came out, seized the benumbed bees and carried them off to the outside again, not allowing them to enter. I have shaded the hive entrance, but it does not seem to have much effect.—G. A. W., Manchester, October 30.

REPLY.—1. Bees sent are workers. 2. The ordinary or native variety. 3. Hives must not have their entrances closed in winter; but it is useful to shade the entrances in bright sunshine during cold weather, if the hives face south or south-east. The bees found on the ground may have been old and worn out, and when this is so, the bees in hive will not tolerate them in the hive once they are found "chilled" outside. In view of the very elementary character of above queries, we advise the purchase of a text book on bees. It will save much speculation as to cause and effect on the part of beginners. Not only so, but a guide book is indispensable, if success in bee-keeping is desired.

[3949.] *Re-queening Hives.*—Having two strong stocks in frame-hives, which yielded no honey this season, I destroyed both the old queens, and introduced young ones the day following. I afterwards found seven or eight uncapped queen-cells in each hive (light coloured). Do you think that swarms have issued from above? If so, have I done right in re-queening them? Name sent for reference.—HORNET, Hinckley.

REPLY.—The fact of queen-cells found being "light coloured" makes it probable that the stocks have swarmed, and if that is so, it would account for the failure in surplus-gathering. Besides, bees in many

districts have—from various causes—done badly this season. However, as the queens have been destroyed, nothing can be done but leave the introduced queens and hope they will do well next year. We regret delay in reply to your note, which was accidentally mislaid.

[3950.] *Using "Ekes" Below Frames.*—In your monthly *Record* for September, the excellent article headed "Work for the Month" is full of good hints to bee-keepers; but would you kindly explain how I am to carry out the following one, and tell me if you advise it? On page 146 (last paragraph but one), it says: "If all is snug and warm above in hives, we do not care how much air may circulate below, provided there is no actual through draught; but we like a 3 in. space below frames from end of October to March, using a 3 in. eke for the purpose." I have these "ekes," but do not know how to use them. Have I to lift up the body-box and will the (ten-frame) body box fit on to the eke?—(Col). C.S.S., Weymouth, October 13.

REPLY.—The remarks you refer to are our own, and they apply—practically—to hives having an outer case. The "ekes" in question are only supplied with the "W. B. C." hive, and are made to fit the body box below which it is placed in winter. Of course, the hive body is raised and set above the eke. In early spring, when stimulating breeding, the eke is removed from below and set above the body box, when it helps in keeping all snug and warm.

[3951.] *Sending Bees to the Heather.*—I have two hives in which the brood is chilled or else is affected with foul brood. I am therefore sending a sample of comb for your inspection. At the end of July last both hives were strong in bees and brood (healthy), and each was headed by a this year's queen. We will call the hives Nos. 1 and 2 respectively. At the time mentioned above I sent No. 1 to the moors (five miles distant) for the heather. No. 2 followed a fortnight later. In each case the hives were despatched at dusk and the bees liberated by myself next morning. Plenty, or, I should say, quite sufficient, ventilation was allowed during transit. At the end of August both hives were strong and still appeared healthy, though in neither case would the bees pass up into the supers. I was unable to again visit them till the beginning of October, when it was my intention to remove the surplus (if any) and make arrangements for bringing the hives home again. I examined No. 1 hive first, and though not much surprised to find no surplus, I was amazed to see how the bees had dwindled, there being barely enough of them to cover three frames, while in the other seven frames there was brood of the sample I am sending you now. There were sealed stores on each of the nine frames. I may say the foregoing applies exactly to No. 2 hive. There are some cases of foul brood in this neighbourhood, and have been for two or three years at least, but my bees have never been infected with any disease till now. I might also mention that before I removed to the moors I noticed on a few occasions on the alighting-board of No. 1 hive a few dead matured white grubs, which the bees had evidently brought out from the hive. It appeared to me at the time, that this was just a natural case of a strong grub or two which had not hatched out. No. 2 hive showed no such symptoms, but now both are alike. In their new location Nos. 1 and 2 were about eighteen feet apart. Now, I wish to know if it is a case of foul brood, or is it only chilled brood? If former, I presume the proper thing will be to destroy the lot, but if the latter, what remedy can I adopt? I have one healthy lot still at home, which was built up from a "driven" swarm and fed up since the others went away. I do not want to bring the infected bees home till I know how to act. If only chilled brood, shall I unite my three lots together, putting all in the healthy hive, or unite Nos. 1 and 2 in one of the hives to themselves, and give candy in case there is not sufficient sealed honey to winter on? I would be glad of an immediate reply on account of the lateness of the season. — PUZZLED, Liskeard, October 19.

REPLY.—After inspecting the comb sent we have no hesitation in saying that the stock from which it came was infected with foul brood before being sent to the heather. In fact, it must have been diseased early in the year, judging from the contents of some cells. With regard to treatment at this late season, our advice is to destroy the lot. Any attempt to utilise the bees as a stock will be labour in vain, while it would be very risky to unite them to the healthy stock still at home.

[3952.] *Keeping Queens in Winter.*—Will you kindly answer the following in your next issue? Can a young queen with about fifty workers be kept alive during winter if put on three shallow-frames filled with honey? They are now packed in a Hudson's-soap box made snug, confined and kept in kitchen, with plenty of ventilation. —E. B., Ealing, October 30.

REPLY.—The chances are all against safe wintering; and even if the queen was alive in, say, February next, what use could she be put to? If intended to requeen a full stock with, why not introduce

her now? The queen, and even a couple of hundred bees, would be of no use for building-up a stock from next spring. We think it would be a waste of time to try to preserve the queen in the way stated.

[3953.] *Vicious Bees.*—I have one stock of bees different to all the rest, and cannot understand the reason of this. When I remove the quilts to look into the hive, or, indeed, touch the hive in any way, the bees, in a moment, are out on the flight-board by the dozen and are most vicious. I have been feeding them for some time, and have now packed the hive down for winter, with a cake of candy on top, but would ask:—Do you think the queen is missing? I have examined them on several occasions and found brood each time up till end of September.

I was very glad to read the letter of "Amateur, Bristol" (6030, page 377), on queen-raising, and shall be delighted to see detailed article promised by him in due course. I had always regarded queen-rearing as too delicate an item of bee-keeping for me to tamper with, but the letter in question has driven all my qualms away, and I hope to try my hand. My driven bees are doing well.—W. H. R., Hellingly, October 21.

REPLY.—It is impossible to say whether the stock is queenless or not, without examination; but the fact of no brood being found at end of September does not imply more than that the queen had ceased laying at that time. You had better leave the stock alone now, and see to it early next spring, when not only will the question of queens be settled, but you may find the bees less vicious and more amenable to handling.

CHICKENS HATCHED BY BEES.

An ingenious and original American, while tending his bees in an ordinary bee-hive, noticed one day while handling a swarm that the temperature within the hive appeared to be similar to that in his incubator. He thereupon put the matter to the test by means of the thermometer, and found that his senses had guided him aright. It then occurred to him that he might combine the industries of honey-making and egg-hatching, and make the superfluous warmth from the one provide the necessary temperature for the other. According to the *Scientific American*, he placed twenty eggs in the upper portion of the hive and separated them from the working apartments of the bees by means of a cotton cloth. The eggs were further protected by cushions made from a quilt, and left in their unique position for the requisite number of days. Eighteen of the twenty eggs were satisfactorily hatched.—(*Communicated.*)

Bee Shows to Come.

November 5 to 18, at Plymouth. — Annual Show of the Devon B.K.A., in conjunction with the Plymouth Exhibition. Twelve classes, with good prizes, for honey and bee appliances, including special prize of £1 1s., for two 1-lb. sections. Schedules from F. W. Palmer, Turner Cottage, St. Badeaux, Devonport. **Entries closed November 1.**

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances, Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries closed November 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immedately following the receipt of their communications.

A TEN YEARS' READER (Manchester).—Cough Candy.—We do not know of any recipe for making honey candy suitable for a cough; but one of several recipes in the pamphlet on "Honey and its Uses" reads as follows:—"Cough Mixture.—Honey, sweet oil, lemon juice, and sweet spirits of nitre, in equal parts. Dose, ½ teaspoonful."

C. C. (Cheltenham).—Faulty Comb-foundation.—We hope to be able to give some information on the question dealt with in your letter dated October 19 in a short time, either privately or in our pages.

Honey Sample.

SINFIN (Derby).—Sample sent is from mixed sources, which makes it impossible to define any one in particular. The quality is fairly good, though rather poor in consistency. It is not up to show-bench standard; besides, it is beginning to granulate, and also shows unmistakable sings of fermentation having started.

Suspected Comb.

J. L. (Perthshire).—Comb sent shows a bad case of foul brood of old standing. The skep from which sample was cut should be burnt along with its contents.

****** Some Queries and Replies, &c., are unavoidably held over till next week.***

Editorial, Notices, &c.

PERTHSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Perth Bee-keepers' Association was held in the City Café on Saturday, October 28. The report submitted by the secretary stated that they were in a better financial condition than they had ever been before. There had been sixty entries to their annual show in August, as compared with twenty-one in the previous year. The display and quality of honey were all that could have been desired, especially in the class for extracted honey. The income for the year amounted to £22 14s. 7d., which included a balance from last year of £8 4s. The expenditure was £12 5s., thus leaving a balance of £10 9s. 7d. The report was unanimously adopted.—JAS. HUTCHISON, secretary.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 8, *Henrietta-street, Covent Garden, London, W.C.*"

NOTES BY THE WAY.

[6085.] The season now with us partakes more of the retrospective and prospective than the present. There is—or should be—no outdoor work to do in the apiary at this late period. The last touch required in order to leave all our stocks safe for the winter having been given, we can now turn our attention to the instructive side of bee-keeping, and review the past year's work among the bees; possibly the hopes which ran high in May last may not have been realised in full, but no doubt we have each much to be thankful for, and if fortune has not smiled on our efforts from a financial point of view, let us remember the many healthy, happy hours spent in the glorious sunshine, with the merry hum of the bees around us. Nor should we forget the example our busy little labourers gave us by their incessant toil whenever an occasion offered for the bees to be up and doing. We have also gained another year's experience to enlarge our view of the pursuit, while it is to be hoped that such "notes" has increased our knowledge, and enabled us to jot down in our record—or, may be, in memory only—what will prove stepping-stones to success in the future.

Another bee-season! The minds of bee-keepers usually look forward to another season with hope, and hope paints the future in roseate colours. Nor should we complain of this. Man is always hoping to be blest, and those among us who are bee-men, and whose aims and needs are kept within reasonable bounds, have been blest in by-gone years by the bountiful hand of providence, through the labours of the busy bee, and though "the road to fortune is not through a bee-hive," yet such of us as have given proper attention to the work of the apiary, have much to be thankful for in not only keeping the wolf from the door, but in helping to provide for the "rainy day."

Size of Sections.—While regretting my inability to be present, I was glad to see this subject was brought before the Conference by our friend, Mr. W. F. Reid; and, as Mr. Boxwell later on mentioned my name in connection with the remarks he made on the matter, I may be excused for inserting a few words on the subject. For many years I used the 4¼ in. by 4¼ in. by 2in. two-bee-way sections, and was well satisfied with them. Then came the new idea of a four-bee-way section of the same size. These I also tried for some years in racks made with bee-ways at the sides, and with slotted dividers. This latter change was supposed to insure every comb being built out to the wood of the section. But had our hopes been realised, the 1-lb. sections so filled would have scaled an average of 17 oz. to 18 oz.; but practical experience in actual use demonstrated the fact that these extra bee-ways along, above, and below were of no help whatever in getting better filled sections. There was no advantage over the older two-bee-way sections; but some disadvantages were clearly shown: (1) They are not so easily handled; (2) combs are far more liable to damage; (3) not so easily or quickly glazed; (4) not so strong when glazed either in handling or in travelling owing to glass resting only on the corners. Retailers are especially liable to grasp the section in centre when handling, and this is where thin glass will give way.

With regard to width of sections, I first noticed what some of the prominent comb-honey producers in America had to say in *Gleanings* and other American bee-journals, and then (to give them a trial) I ordered two or three thousand of the 4¼ in. by 4¼ in. by 1 15-16 in. two-bee-way plain-top No. 1 sections. These I have now used for several years, and do not intend having any other so long as this size is procurable, neither do I care for grooved sections, or those with split tops. Indeed,

when these have been sent me by mistake, I have either sold them or put the "split" at bottom. We use only the "wheel-fixer," and my daughter has filled some three dozen section-racks in a day, besides doing other jobs; and with full sheets of foundation we rarely find one drop off, although the racks have to travel over a very shaky road to my out-apiary. The thinner sections can easily be wedged up tight by putting a thin board at the head of the rack used.—W. Woodley, Beedon, Newbury.

TALL VERSUS SQUARE SECTIONS.

[6086.] The article by Mr. Stanley Wright in your last issue (6077, page 433) appears to me to entirely miss the point which the writer is endeavouring to prove. He will not, perhaps, object to my criticism, if the point at issue is thereby made a little more clear. The question is: Whether there is an advantage in the difference of size and shape of section; but he deals almost solely with sundry incidental matters which are not truly relevant.

Thus, the width of the square section is stated as 2 in., whereas this should be taken on the same basis as the plain, tall section, viz., over the wood, minus the bee-way. Also, although the hanging section-frame was in use long before the tall section was thought of, the only form of square section-holder considered is the section-rack, which is again not fair to this size of section, because to get a fair analogy, frames only, or racks only, should be pitted, and $4\frac{1}{4}$ in. plain sections only should be considered if the object of the enquiry is to find out the preference of the bees, and the comparative results in the honey-harvest.

Here let me say that I am not viewing the matter in the interest of the large bee-keeper, who may be trusted to use his own judgment, and would probably be able to produce as much honey with one form of super as another. Some men will get honey under difficulties, while others will fail under favourable conditions. But if there is an advantage in one form of super under "let alone" or other conditions, the knowledge is valuable to both big and little bee-men, and if these will give us of their experience we shall all benefit.

The issue resolves itself into the question: Is work begun upon a deeper or thinner section than upon a shallower and thicker one? And is it finished in less time, is more comb-honey obtained by its use? Or, to sum up: Do its advantages outweigh its disadvantages?

I must own at the outset that, while I am running both sizes of section, the question is with me still an open one, so that I am not posing as an authority, but am anxious to see the matter fully discussed by those who have now had experience of each under (and this is the important point) the most similar conditions.

Your correspondent does not do this, and I fear his letter is likely to prejudice the unthinking or easily-led bee-man unduly against the $4\frac{1}{4}$-in. section, so I may be forgiven if I take his points first:—1. This is well taken. Change is expensive, and uniformity of supers very desirable. But the same result may be obtained by a shallower shallow-frame, i.e., the same depth as the $4\frac{1}{4}$-in. section-frame. Such frames in combined supers have been on the market for a long time, and it is not difficult to reduce both shallow-frames and boxes to the required size. Then, if all shallow-frame fixtures may be brought in, there only remain the section-racks to consider, and it is obviously advantageous to retain a size of section which will admit of their use if desired, as the $4\frac{1}{4}$-in. plain section with special separators. This size of section does necessitate also a change of those more expensive fittings which we call section shipping-boxes. 2 to 8. These apply equally to the $4\frac{1}{4}$-in. plain frame super. 2. This evidently refers to supers filled with comb, or is badly expressed. It is very seldom that one can fill supers with empty comb, and if they are so filled I do not believe that the size of section makes a fraction of difference to the early start. It is also evident that two-bee-way sections are being compared here, as there is freedom of passage-way in a four-bee-way section-rack. 5. The method of fixing foundation is partly responsible here. 6. Probably the "separators" are at fault. There may be suggestions of brace-comb upon them which do not exist upon the newer fittings. I suggest that this fault is not universal, or even general. 9. This applies solely to the $4\frac{1}{4}$-in. bee-way section. Plain sections occupy practically the same area, with the advantage on the side of the more compact pound. 10. Here for the first time is common ground. Does the tall section look better than the square? Does it sell better? Personally, I think it does look better, both on show and on the table, where it cuts up attractively, and is not quite so—what shall I say?—"hunky." But if I were offered a piece out of either I should choose the square. Looks are not everything. We cannot ignore them, though, and if it can be shown that more money can be made out of tall sections with no more work, I for one will sacrifice my feelings! But one must consider the matter not only from the point of view of the consumer, but also of the producer and the bees. I am not

convinced that bees will more quickly adopt tall sections. (I am, of course, considering plain sections only in similar holders.) My own tests have not borne this out. In fact, I think the square section has a trifling advantage; but it is so practically impossible to get single colonies in identical condition prior to the honey-flow that nothing but an extensive average test is of value, and my figures are not conclusive. At the same time, it is well-known that shallow-frames are more quickly adopted than standard frame-supers, and the principle should apply in some proportion to the shallower 4¼-in. frame also. (As an inducement to the bees to begin work in the first rack put on, the frames may be spaced a little wide, and the separators added in a day or two.) If the tall sections are sealed quicker—and, so far, I think they have a slight advantage—this must be set against the later start. But it is really a more important point, as bees can be compelled to begin work in any form of super by proper management.

The tall section is thinner, consequently the contents of the shallower cells must be ripened sooner, and therefore sooner ready for capping. Also, there are more seams of bees to the thickness of honey, which should make a favourable difference, particularly at heather-time. Against this, there is greater bee-labour, and more wax to the pound of honey. With regard to safety of transit, it is a question whether the tall section does "ship" any better than the square. I have had sections which, while fairly filled, have been attached to the wood by little more than the foundation. This may have been a fault of the bees, and, having tried to cure them of it, I do not expect a recurrence, but the deeper cells of the square section ensure a better attachment. While upon the point of damage in shipment, may I put in a word for the four-bee-way section. The bee-way corners give good finger-hold, and clumsy grocers' assistants are not so likely to have accidents which may be imputed to the shipper. Even the bee-man himself may sometimes have a "regrettable incident," or bruise the capping of a plain section with thumb and finger near the wood, a detriment for which no lace-edging can compensate. (Plain sections, like all others, should be picked up by the corners.) So far, and having full regard to the claims of the tall section, my own opinion is in favour of the square section, plain preferred, which, as I have endeavoured to show above, without undue arguments, may perhaps possess some of the good points of the 5 in. by 4 in. without its drawbacks.—L. S. CRAWSHAW. Ilkley-in-Wharfedale, November 6.

THE SEASON IN ROSS-SHIRE.

[6087.] It is in a somewhat more subdued frame of mind that I take pen in hand to write the sequel to my last report, for the outlook, appropriately rosy during June, took on a more sombre hue in the following month, with the result that to many the honey-season has been an utter failure. To begin with, things looked wondrous bright—hives overflowing with bees, all available supers on and occupied, new racks were put together hurriedly, and discarded ones raked forth from dusty corners. The local pessimists assured us that all this was too good to last, and, unfortunately, they were soon in a position to say, "I told you so," for, in mid-July, just when stocks were at their strongest, and white clover at its best, the rain came and stayed with us until well on in September, so that heather men are once again left lamenting. Results all over vary widely, from nothing per hive on the uplands, to excellent returns in the most favoured districts; although, even in the latter, the crop is not more than two-thirds of last year. A common practice with our Crofter bee-keepers is to give one or two racks when the season opens, then let alone until September, and remove at one operation, which is a simple plan and saves a lot of trouble. This time the saving of trouble was quite obvious, as, during six weeks of enforced idleness, the bees had carried all the surplus down below, so that the bee-keeper had only empty combs to remove.

On the other hand, in purely white clover districts, where no dependence is placed on the fickle heather, bees have invariably done well. One bee-keeper has secured four racks of sections from his best stock and about a cwt. of extracted from each of other two. In 1904 his best stock gave 120 sections and some extracted honey as well. Being situated somewhat between these two extremes I have shared in both crops, but, while carrying forward an abnormal number of combed sections for next year's use, I have secured a good quantity of honey as well. None yielded less than two, and the best stocks gave up to three racks of sections.

I had them storing in four and five racks, but if only well-sealed sections are to be counted, three racks was the maximum, just as about last year it was about the minimum yield. Prices were good at the start, and being first on the field, I had no difficulty in selling at 10s. per dozen, but shortly after that Strathpeffer, our local market, was invaded by honey-selling pilgrims from all points of the compass, who speedily knocked down the price to 8d., and even less. The premature stoppage of the honey-flow had, however, one beneficial effect in ridding local pro

ducers of these pests as effectually as any "tariff" could have done.

Personally I have had no exceptional "takes" of honey, although two extra good colonies promised to beat all the rest. The best stock I had working in sections got the swarming fever at the critical time, and in trying to overcome it, I removed several supers to more backward hives. This was to their benefit, but the honey-flow stopping soon afterwards, the stock in question gave only four racks of sections a number of them being second grade.

They also filled an extra body-box with honey, but this, being placed above the original brood-nest for wintering, does not count as surplus.

The colony I have on large frames was so strong that I made an artificial swarm from it. The swarm gave two racks of sections and fully worked out combs to fill a third rack, which was partially stored and capped.

The old stock stored four supers, but with the sudden stoppage of the honey-flow all unsealed stuff was carried below, so the surplus was only 76lbs. During August a shallow-super was half filled with heather honey, but this was left on for wintering. Although the total surplus from stock and swarm comes out on the right side of the three figure mark, there can be no doubt that it would have been better if no division had been made. I note some bee-keepers feel assured that they get more surplus by having a swarm from each stock, but this, I think, is a mistake, especially in an early season like the past one.

The skeppists here work on that principle, and this season the returns were as blank as were their faces when "taking up" time arrived. Better to have all the bees under one roof all the time.—J. M. Ellis, Ussie Valley, November 1.

A BEGINNER'S REPORT.

[6088.] I do not see much bee-news in B.B.J. or B.K.R. from North Kent, so send you a brief report of my own doings. In the summer of 1904 I bought two swarms of native bees which had no more opportunity that year than to lay by sufficient stores for winter. This spring they were in weak condition, but got on satisfactorily. From No. 1 I got 15 sections and 10lbs. of extracted honey, and three young queens; from No. 2 I had 40lbs. of extracted honey. Two of the young queens I used to replace the old ones at the head of affairs in the two stock hives, and with the third I have started a new colony. I send you a small sample of the honey and shall be glad to have your opinion on same. Practically all the honey I took was stored during the first fortnight in July, the weather up to then being so wet and cold. —North Kent, Eltham, November 3.

[Your sample is mainly from limes, and has the "minty" flavour of that honey very strong. It is fair in quality, but cannot be called high-class table honey.—Eds.]

EXPERTS AND FOUL BROOD.

[6089.] As a matter of general interest to beekeepers, I would like to place the following particulars before your readers. It has come to my knowledge that a county association expert on tour visited two apiaries, which we will call A. and B., about 50 yards separating the two.

When examining A., he found foul brood, and advised destruction of diseased stocks. Then he went to B., but did not examine, as all stocks were supered, and the owner confident that all his stocks were healthy The expert did not tell B.'s owner that foul brood existed in A., but owner B. thinks he should certainly have done so, because the latter would then have taken precautions which otherwise would have been unnecessary, and his contention seems, to me, quite reasonable. I do not give names, wishing to avoid all personalities, and if you approve, the county need not be named, but your opinion would oblige. I enclose name, etc., and sign—Bacillus.

[There can hardly be two opinions with regard to the want of care and forethought on the part of the expert in failing to notify "B" of the need for caution and watchfulness in guarding against infection; not only so, but this might have been done without directly compromising "A." We say this because of the probability that the latter may have been extremely anxious that the condition of his apiary should not be noised abroad, and thus have induced the expert to keep silent. We do not, of course, attempt to justify the expert's action, but merely to show that he may have been influenced in that way, and yet given a timely word of caution to "B."—Eds.]

(*Correspondence continued on page* 446.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We were very pleased to receive the photograph which enables us to illustrate on next page so life-like and characteristic a picture of the two opposite sides of bee-keeping as that depicted. The writer of the following "notes" is not owner of the apiary shown, but a friend, who is also a B.B.J. reader and an amateur photographer, and, being interested in our bee-garden pictures, kindly took the photograph, and sent it on along with a

report of his own bee experiences this season. He says:—

"The above photograph (taken September, 1904, the day on which the hives were brought back from the heather) shows an ancient and a modern bee-keeper, and their methods, side by side. It is the apiary of Mr. David Scott, Kincardine on Forth, situated in the extreme west of Fifeshire, and on the eastern fringe of that great fertile 'bean-growing plain,' the Carse of Stirling and Falkirk. Bees have been kept by the family of the old man for many generations. His memory can carry him back three-score years and ten, and in all that time, bees have stood at the 'back door.' I was induced to take this photo, being struck with the similarity between it and the one shown in the 'B.B.K. Guide Book' of the old-fashioned apiary in Kent.

"The old man seen on the left is the owner of the bees, but advancing years have compelled him to hand over the management to his nephew, the younger man on the right. He, being a joiner by trade, and becoming possessed of a 'Guide Book,' speedily saw that the day of the straw skep was fast passing away, and, after a great amount of argument, he at length obtained the consent of the old man to transfer half of the bees to frame-hives. This was done last year, according to instructions given in the 'Guide Book,' and proved such a success that the remaining skeps, with the exception of one (which the old man insisted should be left for him), were transferred to frame-hives this summer with very gratifying results.

"The season of 1905 has proved the best for a number of years. We had the advantage of an early and abundant supply of honey-yielding tree blossom, after which came the bean bloom. Then about the middle of August, we transported our hives to the moors, the heather being earlier in bloom than usual this year. Owing, however, to adverse weather during August and part of September being very wet, the results were by no means up to expectations, very little surplus being found in the supers; but an examination of the frames, when the hives returned, showed that a large supply had found its way into the body-boxes, which made very little feeding necessary before packing up for the winter.

"My own apiary is situated a short distance from that shown above. I only started bee-keeping two years ago, and, as a believer in the adage, 'make haste slowly,' I have, as yet, only four hives; not only so, but as there has been no bee-keepers in the family since the days of my grandfather, all my appliances are modern, and a contrast to the state of things recently seen in the apiary of my friend."

MR. DAVID SCOTT'S APIARY, KINCARDINE-ON-FORTH, FIFESHIRE.

(*Bee-keeping, Ancient and Modern.*)

CORRESPONDENCE

(*Continued from page* 444.)

THE SIZE OF SECTIONS.

[6090.] I read with much pleasure and interest your report of the late "Conference of Bee-keepers." As an amateur carpenter and bee-keeper, I made all my own hives and frames, as well as some for my friends. Having also been a bee-man for over 20 years, I can claim to have had some experience of bee-appliances, so it may possess some interest for readers if I give the benefit of what I have learned to others. First, then, with regard to size of sections. I once got a case of 500 of the $1\frac{7}{8}$ width, and never in all my life have I had sections so nicely filled as these were. The bees seemed to like them better than the 2 inch ones, for they filled them right up to the edge, and they were splendidly finished. I often wished to have some more of the same width, but as I thought they were a mis-made lot, not being aware that there were two sizes made, I have therefore never ordered any of that special size, but I shall take care to have them in the future. As to which will suit me best, others may judge for themselves when I tell them that the first two racks of 1-lb. sections I took off one of my hives this summer weighed 47 lbs., or 5 lbs. overweight; and the next two racks weighed 43 lbs., yet all these 84 sections had to go at one price, viz., 9d. each, so you see I was losing on the first two lots removed, as I should have got just the same price if they had weighed 84 instead of 90 lbs., and all buyers would have had full weight for their money. I sell all my sections wholesale, and so long as they weigh 1 lb. each, it should be enough, while if they are more it is to my loss. My own opinion has always been that the 2 inch section was a little too large for 1 lb., but although a regular reader of B.J., I have never seen any but the 2 inch size mentioned by anybody or advertised for sale. There does not seem to be any good reason for fixing a "standard" size, because if the $1\frac{7}{8}$ does not suit we shall soon hear the last of them; just as it was with the tall section and no doubt soon will be with the no-bee-way, as they already seem to be going out of use, so little we hear of them. What we want is a section that weighs 1 lb. when filled, not 18 to 19 ounces, as many do. It is a well-known fact that the retail dealers will not give any more for an overweight section than he will for a nicely finished one weighing 1lb. It is a case of £ s. d. to the man who has to work for his living.

Then on the question of "strength of the standard frame," it is now some years since I gave up using machine-made frames with saw cut in which to fix foundation. I make my own with a solid top-bar, the foundation being fixed with molten wax, and have never had a breakdown from that cause. I always made them true to standard measure till about six years ago, when I tried some with top-bars 1 inch wide in order to see if the extra strength in the width would prevent sagging. It proved a complete preventive of bracecombs, but still the top-bar sagged a little. After this I tried making the top bar 1 inch wide and $\frac{1}{2}$-inch thick; these have been satisfactory in every way so far. I have thus come to the conclution that a $\frac{3}{8}$ top-bar is not strong enough, and shall in future make all mine $\frac{1}{2}$-inch thick. I always use the heavy lead metal ends that were in use some years ago, as they will not bend, break, or drop off, and are safe to hold the frame by in one hand to catch queens or cut out queen-cells. I call them far superior in every way to tin ends, though I don't know of any dealers who include them in their catalogues, except Mr. Taylor, of Welwyn.

Finally, I have never found that "wiring" foundations prevented sagging," and I have tried it almost every known way, having always been fond of thin foundation which has to be "wired" in every case. I make my frames of good yellow pine, and if anybody knows of anything better, I hope they will tell of it in an early number of the B.B.J., as I have about a gross to make this winter. In conclusion, allow me to thank Mr. W. Woodley for all the good things that he tells us in each year. Long may he live to keep on doing it.—T. A. K., Dalton-in-Furness, November 23.

ITALIAN BEES.

[6091.] Much has been written lately about Italian bees, and perhaps quite as much against them as in their favour. Some of your ablest correspondents—who always write articles that every true bee-man can relish—have compared them with our own native bee, and found them wanting in many qualities which our natives possess.

Up to this year I could say nothing for nor against the Ligurian, but last spring I purchased a nice queen, and safely introduced her to a queenless stock in order to test their qualities and see whether or not they suited our locality. Before May was out this queen had filled nearly all the available cells with brood, and the rapidly increasing population demanded more room, which I gave them in the form of a shallow-frame super with drawn-out combs. This they readily took to and later in the season I gave them a deep super also. The bees were the busiest I have ever seen, working some hours earlier and later than

any of my other stocks. The traffic about the entrance was so great that I often thought they were swarming; but this I managed to prevent by thoroughly ventilating the hive, etc. I expected some fine results from this enormous population, and (apparently) hard working. But alas! what a disappointment I had when moving supers. The box of shallow-frames contained about 18 or 20 lbs. of honey, mostly unsealed, and the little sealing that had been done was uneven and very unsatisfactory. In the deep box, some of the frames had not been touched, and the few central combs contained very little honey. So it will be seen that with all their fuss these strangers were much below the average black bees, and they had not a pound of sealed stores in brood-nest. Then again, my native bees generally leave supers through the "porter escape" in a few hours; but after three days' persuasion, I had to help the foreigners off with a feather, and the "escape" was not at fault.

We youngsters in the craft would be much better off if we only took the solid advice so often given in your pages, and ceased "experimenting" at least, that is my opinoin.—T. ALUN-JONES, Flintshire, November 2.

"GLASSING" TALL SECTIONS.

[6092.] Referring to the article on "Tall versus Square Sections" in last week's B.B.J. (6077), page 433, I note that your correspondent, Mr. Stanley Wright, mentions, in enumerating the "disadvantages" of the tall section, No. 5, is "more glass required for glazing." It may be of interest to inform Mr. Wright, and other readers who use the tall section, to know that there is a photographic plate in common use, size 5in. by 4in., and anyone not an amateur photographer himself, if he chances to know a professional, would be able to "capture" spoilt or used glasses in large quantities for the asking, as they are usually thrown on the dust-heap. They are easily cleaned, and just fit the tall section. I therefore offer the suggestion for what it is worth.—H. W. B., South Woodford, November 3.

REMOVING BEES FROM HOUSES.

[6093.] I was engaged on a bee-driving expedition in Flintshire a few weeks ago, and a bee-keeper, who happened to be present, told of his intention to "take" the bees at Halghton Hall by suffocation that night. He gloried in the fact that he had smothered some bees on the previous night, so I decided to try and forestall his killing propensity. I inquired the way to the Hall named, and not very long afterwards was investigating the "home of the honey-bee" referred to. I was shown an ancient arched doorway boarded and bricked up on the inside, leaving about a foot of space, and this space was simply crammed full up with honey, comb, and larvæ. It looked like a two days' job, so I decided to leave it. I told the lady owner I feared that it would take up more time than I could spare to get the bees and combs out. But on being told that others had made the same excuse for not removing the bees, because they were afraid of them, that settled the matter, and it was not long before I had my coat off and started operations. I found that there were two colonies working quite harmoniously together. After using a little smoke, I caught sight of the queen, and, seizing her by the wings, placed her in a large box, and soon had the pleasure of seeing bees gathering round their queen in the box.

I would here like to give a word of advice to brother bee-keepers. If, at any time, you are removing bees from roofs, chimneys, trees, or elsewhere, never break any of the combs up and so cause honey to run; if you do, it is almost certain that the whole colony of bees cannot be secured that day. On the other hand, in case you are compelled to remove the bees and combs at once, cut all you can out, but leave a straight piece of comb till next day for bees to cluster on, and on returning you will find that the bees have cleaned up all spilt honey, and are clustered on the comb left. This plan I have found most successful.

But, to go on with my description, I cut out all the honey I could, and took the bees away, leaving the second colony to clean up the spilt honey. Next day I got the second colony in the same way. The total quantity of honey removed was 226 lb.

A rather exciting incident occurred during the removal of the second colony. The bees swarmed on to me, and I was covered from head to foot with no help at hand. I had to smoke them off. I had, however, hung my coat up, and some of the bees went on to that, and by a little smoking I got the bees off my person and they found those on my coat, so that I easily got them boxed up.

This makes my twenty-fifth removal from residences. I shall at all times be pleased to give advice or even assist in such removals if stamped envelope is sent for reply.

In conclusion, I might mention that I have never found a case of foul brood in any tree, roof, wall, or chimney yet. Indeed, the only place I have found the disease this season was in frame-hives. Not a single case have I seen in the 230 straw skeps and other domiciles that I have driven and removed honey from this year. I keep sixty-six frame-hives myself, and

my experience has taught me I have conscientiously stated above.—W. H. Brown, S.B.K.A., Clevedon Apiaries, Shrewsbury, November 1.

SWALLOWS, SPARROWS, AND BEES.

[6094.] I can fully bear out the statement by your correspondent, Mr. Geo. M. Coles, in last week's issue of the B.B.J., that drones have been seen in swallows' bills. I have myself observed them; indeed, I can also say without exaggeration that I have scores of times seen swallows dart down to within two or three yards of me while watching, catch a drone, and carry it off. On one occasion I was so annoyed, and fearing they might catch a young queen in the same way, that I took up my gun and shot some of the birds. I have also been obliged on several occasions to destroy nests of young ones. It is the male bird which is most troublesome. Sparrows, too, although a very useful bird in the garden, are great enemies of bees, for they will not content themselves with drones only, but will carry off a great number of workers.—C. Smith, Leiston, November 6.

SELLING HONEY.

UNITING BEES AND SWARMING VAGARIES.

[6095.] The suggestion of one of your correspondents that a centre for the sale of honey be formed among B.B.K.A. members is a very good one. Some of us who have difficulty in disposing of our produce would be most happy to supply those who cannot meet the demand in their district. I have certainly managed to sell mine at an average price of 9d. per 1-lb. screw-cap jar, but only after hawking it far and wide. Were it possible to send all my produce to one centre, I should be prepared to take a lower price, because of the trouble it would save, and yet 9d. is none too high a price for clover honey as white as snow, in screw-cap jars at 1½d. each.

Uniting Bees.—During the sharp frosts we had in October I had an opportunity of buying some stocks in skeps rather cheaply. They were too weak to stand the winter separately, and the weather was far too cold for driving, so I was puzzled for a time how to unite them. At last I took three spare hives and put a skep in each. Then I cut out the top of each skep, and pinned a piece of brown paper over the hole, first making numerous small holes in the paper with a packing needle. I next placed another skep on the top of the first one, and put over all the hive roof. The bees ate their way through the brown paper and united without any fighting whatever. I used neither smoke, flour, nor scented syrup.

Swarming Vagaries.—Can you, or any of your readers, straighten out this tangle of swarms, which I had noted in my diary, but which I have had no opportunity of mentioning in the B.B.J.? The entries read as follows:—

May 19.—Hive No. 1 swarmed. Hived the swarm in No. 2 on old stand and moved No. 1 to another position.

June 3.—Eggs laid in No. 1 only fifteen days after issue of swarm.

July 6.—No. 1 swarmed again. Swarm weighed 5¼ lb. Put swarm back.

July 7.—No. 2 swarmed. Hived in No. 3 and moved No. 2 to another position.

July 10.—No. 2 swarmed again.—S. D., Charing, Kent, November 4.

QUEENS CEASING TO LAY.

[6096.] Reading through the Journal of last week, in the article headed "Among the Bees" (page 431), I find almost exactly the same coincidence that befel me this year in respect to queens ceasing ovipositing. Early in the year I introduced a young "golden" queen to one of my stocks. All went well for some weeks, and she was proving herself a very prolific one, when, to my great surprise, on looking through the hive previous to supering, I discovered no unsealed brood at all. A week later revealed the fact of no brood whatever. She had ceased laying, and for a whole month there was not an egg laid by her, just when it was most wanted. Seriously thinking of superseding her, I gave one more glance through the hive, and actually found she had recommenced laying. Since then, and right into October, she has proved herself well worthy of heading a colony. Others may have had a similar experience; or, if not your correspondent's case, 6074 is not exceptional, as he no doubt will be glad to learn, in way of consolation.—W. Fay, Havant, November 6.

P.S.—Your valuable journal has assisted me greatly since I started bee-keeping two years ago.

Queries and Replies.

[3954.] *Bees in Suburban Gardens.*—I have taken 65 lb. of surplus from my only hive, but the work in sections was very bad, as only six were filled nicely; the remaining honey was from frames in supers. Considering the loss of swarm (mentioned in my query on page 276), and that the hive is located in a suburb of Southampton, in the back garden (size about 100 ft. by 20 ft.) of an ordinary terrace house, I consider myself rather fortunate to do so well. I find the bees are not so troublesome to

neighbours as I feared they would be in such close quarters. The worst time was when giving the bees extra room in supers, in order to check swarming. This caused them to be very irritable for a few days. 1. Is this usual? 2. Will you kindly give an opinion on the two samples of honey sent herewith? I may say No. 1 is from the hive mentioned above, and No. 2 is from a friend's stock.—A NOVICE, Southampton.

REPLY.—1. No, there is no reason whatever for bees turning vicious when supers are given. 2. The colour of No. 1 sample is similar to that of lime honey. It has, however, none of the characteristic flavour so noticeable in that honey. It is also rather thin, and the flavour is somewhat rank and unpleasant. No. 2 is a much better sample, deep golden in colour, of good consistency, and very fair in flavour.

[3955.] *Pollen-clogged Combs.*—Will you advise me upon the following points in your columns? 1. Is it necessary to break up standard frames of comb—after honey is extracted—which have a large amount of pollen left in cells? In other words, can frames of comb in that condition be replaced in hives for use next year? 2. I notice in some of the frames removed from hives after extracting the honey that a portion of the combs are very brown in colour and have evidently not had any honey in the cells. What is this due to? 3. Also, can frames in that state be used over again next year?—C. D. A. L., Harpenden, November 4.

REPLY.—1. Frames of comb in which most of the cells are filled with pollen (i.e., "pollen-clogged") become useless for brood-rearing, and are discarded. 2. The discoloration of combs merely shows that the cells have had brood reared therein, the brown colour being the cocoon left behind by the young bee on emerging from the cell. 3. Yes.

[3956.] *Bee-keeping in Canada.*—I have a friend (a fruit farmer in Canada) who happens to be over here in England on a visit, and having become interested in bees, he wants to know how he can get on with them in Canada. He is desirous of starting with one or two hives next spring, in order to get used to their ways a bit, and would be much obliged if you could tell him, through your columns, what is the best book to have on Canadian bee-keeping, also a good firm of appliance manufacturers over there. It seems that the people who keep bees in his district are not quite up to date, and he would like to get started on the best lines suitable for this part of Canada. My friend lives in Ontario, on the shores of Lake Ontario, about 100 miles this side of Toronto. Hoping I am not troubling you too much with these questions, and thanking you for former help given me in replying to my queries.—G. RALPH BAKER, Willesden, N.W., November 5.

REPLY.—We are very pleased to send by post for perusal our file-copy of the *Canadian Bee Journal*, wherein your friend will find all needful information regarding Canadian bee-keeping, and may, if he pleases, join the Ontario Bee-keepers' Association. He can also see who are the chief bee-appliance manufacturers.

[3957.] *Queen Vagaries.*—Amongst others I have a hive of Italian bees which worked well up to July last, carrying in a good deal of pollen, and nearly filling a super of shallow-frames with honey; but after that we had no rain for about eight weeks, and a good deal of hot sunshine, consequently no honey could be gathered. The Italians, which had been so busy previously, seemed to nearly cease work, and a week or two afterwards I sat near the hive from about 2 to 3.30 p.m., during which time I saw what I took to be a young queen enter the hive three times. There was going on in the hive two distinct sounds of throbbing noises, one set rather higher in tone than the other, and this lasted, with intervals, all the time I was there, but especially when the queen returned to the hive. I did not see any queens come out of the hive, and should like your opinion of it. The bees evidently had not swarmed, or I should have heard of it; besides, on opening the hive the same evening, and taking off the super, I found six empty queen-cells, but saw no queen. The bees also were so numerous that they actually (not literally) "boiled over," and hung in clusters over all four sides of the hive. On taking super off some weeks later it was nearly empty of honey; but the bees are at present very strong. I therefore ask: Do you think it was a case of superseding the old queen? Also, why did the bees not swarm with so many queen-cells? The same queen might have come out all three times without my noticing, as she would not show up so well as when returning.—NOVICE, East Keswick, Leeds, November 6.

REPLY.—It is impossible to explain from a distance the unusual proceedings detailed above. We may, however, say if it means a case of bees superseding their own queen so late in the year—as we gather from the rather vague dates given—the queen noticed returning to hive at end of October or early in November could not be mated, and will in consequence be a useless drone-breeder. If, on the other hand, it was the old queen taking an airing flight, all will be right. An examination of the combs would probably make matters

clear, for if the queen now in hive is a virgin, there will be signs of drone-brood in worker-cells.

[3958.] *Renewing Candy Cakes.*—I gave my bees a good supply of medicated syrup in September when feeding up for winter. Then, when finally packing them down about the end of October, I placed a 2-lb. cake of candy above frames of each hive, and covered all down with quilts, etc. But on taking a look now, just to see how the candy was being taken, I find it all eaten up and gone! Will you, therefore, please say: Should I give more candy now, or defer giving a fresh supply till January, and then give syrup food during February and March?—PAUL, Peterborough, November 6.

REPLY.—All depends on the amount of food given in September, and what honey was in store when feeding commenced. The proverb says, "Enough is as good as a feast," and if the bees are sufficiently stored, feeding now does more harm than good. In other words, to be quite safe, each stock should have about 18 lb. or more of food in store now to last till February next.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
October, 1905.

Rainfall, 1·70 in.	Minimum on grass, 20° on 17th.
Heaviest fall, ·56 on 30th.	Frosty nights, 8.
Rain fell on 14 days.	Mean maximum, 50·8.
Below average, 2·21 in.	Mean minimum, 37·4.
Sunshine, 126·1 hours.	Mean temperature, 44·1.
Brightest day, 6th, 10 hours.	Below average, 4·3.
Sunless days, 4.	Maximum barometer, 30·47 on 11th.
Above average, 4·3 hours.	Minimum barometer, 29·28 on 31st.
Maximum temperature, 58° on 4th and 5th.	L. B. BIRKETT.
Minimum temperature, 24° on 17th.	

OCTOBER RAINFALL.

Total fall, 2.22 in.
Greatest fall in 24 hours, .68 in. on 30th.
Rain fell on 14 days.
W. HEAD, Brilley, Herefordshire.

Bee Show to Come.

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances, Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary Exhibition Offices, Plymouth. **Entries closed**

Notices to Correspondents & Inquirers.

*** We much regret the need for our being requested to publish the following notification from Mr. Newman: — "Could you kindly state that, owing to a severe injury to his eye, the Rev. Herbert Newman, hon. sec., Bishop's Stortford B.K.A., is unable to answer any correspondence at present?"

W. H. A. (Heswall).—"Honey as Food" Pamphlet.—1. The leaflet so named has been out of print for some years, and is not advertised in the "Guide Book." 2. If a sharp silver-print of your apiary is sent, we will be very pleased to include it in our "Homes of the Honey Bee."

F. G. L. (Derby).—Joining B.K. Associations.—We do not know what is meant by the term "joining your association." If your question applies to the Derbyshire B.K.A., the hon. sec., Mr. R. H. Coltman, 49, Station Street, Burton-on Trent, will no doubt give the desired particulars on application.

G. C. (Sheffield).—Candy Making.—Unless a sample is sent for inspection, it is not possible to say why your candy is "neither soft nor buttery." Not only so, but you do not say what directions were followed in making.

J. SKINNER (Bristol). — Altering the "Standard" Frame. — Except in the thickness of top-bar, your frame, as described, is different in several respects from that made by Mr. Geo. Hayes, mentioned in B.B.J. of October 26 (not 19th as you state), and as the question of altering the present "standard" will not be decided for some time to come, any suggested improvements will be fully considered by the B.B.K.A., and sample-frames can then be sent for inspection. That sent by you nearly three years ago is not available at the present time.

F. W. W. (Crediton).—Candy Making.—Your sample is not boiled long enough, and should also have been stirred for ten minutes longer while cooling in order to make it more smooth and "buttery" in grain. As sent, it is not only coarse in grain, but in three or four weeks, if put on the hives, and bees did not at once begin to carry it down, it would probably become quite hard, and unfit for bee-food. Try again, and, with attention to our hints, you will no doubt make a good candy.

Suspected Comb.

S. M. (Surbiton).—There is no disease in comb sent; the cells are simply "clogged" with fresh pollen, and, as all such combs are useless for breeding in, they should be removed in spring and replaced with full sheets of foundation.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BEE-KEEPING AS AN OCCUPATION.

We have recently received a communication, reply to which is requested in B.B.J. As our personal opinion is directly involved, we refer to the matter in this column for the purpose of illustrating the difficulty which confronts editors at times in their endeavour to avoid misleading readers who look to them for guidance. The enquiry comes from India, being dated Calcutta, October 24, 1905, and after mentioning the fact that his interest in bees was first aroused through reading Mr. Cowan's "Guide Book," the writer goes on to say: "My health is failing me after ten years in this country, and I want to take up an outdoor occupation at home that would gain me a living." The letter concludes with a request for replies to the following queries:—"1. After six months' training on a bee-farm, could I expect to clear £30 the first year and £100 the second year with ordinary ability? 2. What capital would be required to start a bee-farm?—Yours truly, H. W. D."

We omit full name and address for obvious reasons, and while it seems hard to answer the first question with a direct negative, it would only tend to mislead our correspondent to say anything less, because it would be sheer nonsense for us to state that such a result could be obtained in so short a time, if at all.

On the other hand, we may go so far as to say that it is not impossible for a competent man to secure a fair living, if he could adapt the knowledge gained by six months' experience on a "bee-farm," where the owner of the latter has attained the end sought by our correspondent, i.e., securing for himself a yearly sum approaching the amount stated. It need not follow that honey-production is intended to be the sole and only source of income, as it is far from likely that this would be the case at the "farm" selected; but we must here repeat the opinion, so often expressed in reply to similar queries, viz., that honey-production alone cannot be depended upon for a living in this country. Moreover it is almost cruelly misleading for anyone to give as an example to inexperienced persons the weight of honey secured from a well-managed apiary in the best seasons, seeing that we are not favoured with even "good" seasons every year, and not seldom the crop requires backing up by other branches of apicultural work to make it pay even fairly well.

It may be said that the above remarks do not tend to promote the industry of bee keeping; but we place more value on fair-minded candour than on making converts or gaining subscribers by creating false ideas of big profits that are not likely to be realised.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of October, 1905, was £495. — From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, Henrietta-street, Covent Garden, London, W.C." All business communications relating to advertisements, &c., must be addressed to "THE MANAGER, 'British Bee Journal' Office, 8, Henrietta-street, Covent Garden, London, W.C."

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

AMONG THE BEES.

TANGING BEES.

[6097.] A year or two ago our leading papers recorded that, somewhere in the centre of England, a picnic party just sitting down to their feast in the open air in some sylvan retreat, had their mirth nearly turned into mourning by a swarm of bees invading the glade where their sumptuous banquet was displayed. Consternation reigned supreme until some of the gentlemen, inspired by recollections of youthful exploits perhaps, seized on all manner of tin, brass, or other vessels on which they could make sweet and melodious sounds, thereby compelling the bees to follow them and settle on a bush close at hand. Beekeepers on reading the fable would no doubt smile an incredulous smile and tell that the bees, after a short preliminary scamper on prospecting bent, would naturally settle in such a place without the use of any tinkling brass or sounding cymbal.

Across the Atlantic a learned professor attributes this "barbaric relic of the past" to sound common sense of country people who do it to drown other sounds and by the confusion hinder them "from following the leadership of their queen." Country people are pre-eminently practical, and by the irritation of the din made by horns, pans, cans, and bells force the bees from want of leadership to settle. The learned Editor,

commenting on this thing, considers that it may "be hard to prove" that a noise of any kind has a "tendency to induce the swarm to alight." Yet in his book, on page 294, he distinctly asserts that "from watching the habits of swarms I am inclined to think it has an effect in causing them to alight." His *alter ego* in a note gives him a nut to crack. I give him another. On which statement will he now bestow his imprimatur?

I have looked up ten modern writers, taken at random, and all who touch on the subject treat it as if it did not warrant serious consideration, or ignore it entirely. One says "The cottagers turn out with key and shovel and 'ring' the bees in districts where old customs are still rife. I need hardly say the ringing has no effect on the bees, but the pleasant reminiscences connected therewith make it always a welcome sound."

"An absurd custom (says another), is very general of beating a metal pan or some such sonorous thing on the occasion of bee swarming. The practice doubtless originated in the precaution formerly observed of ringing a bell or giving some signal of the flight of the bees, with a view to an identification of the property in the case of its straying to a distance. By degrees the idea became prevalent that the bees themselves were the parties interested in the hubbub." This is the most intelligent explanation I have seen of the absurd custom which, as Cheshire wrote many years ago, is now nearly exploded. "In ancient times neighbours gave warning of swarms rising by ringing bells and making noises, and this, by misinterpretation, has associated the clatter with the settling of the swarm." This is how it was all but universally viewed throughout the nineteenth century. It may be interesting to trace matters back as far as we may have any record.

Our eighteenth century writers mostly pass it by in silence or scoff at it as an exploded superstition. Scotch prejudice did not give it much countenance or support, and I may summarise by quoting one leading writer: "For forty years I lost no swarm but one, which was sonorously tanged." How it was viewed a century earlier may be gathered from what has been said by three of our most charming writers: Southerne "mislikes it much"; Levitt "considers it a very ridiculous toy and most absurd custom"; Lawson says "Ringing in time of swarming is a mere fancy."

Two of our earliest writers, Hyll and Butler, give the raison d'être for the existence of the custom, so they may be worth quoting. "When the swarm is up and busie (says Rev. Mr. Butler), in their dance and jollitry, it is a common use and custom, for want of other music, to play them a fit of mirth with a pan, bason, or candlestick, or such-like instrument of brass; so to stay them, and this indeed the ancients used, as Claudian and Virgil witness, and this for two reasons:—First to lay public claim to them, that a covetous neighbour having beestalls near you may not lay a wrong claim to them; and secondly, to drown the noise of their singing or voice, that they may not hear the command that would entice them away." Hyll (or Georgius Pictorius), says, "When a swarm is up ring a basin or kettle—they with the shrill sound are made astonished, and so swarms are called together with pan, basin, or kettle." As his work was a compilation and translation of the writings of ancient beekeepers, it may be considered he was recording an ancient custom, and so we find he was.

Harking back, we find Columella refers to the practice being followed in his time. Pliny wrote "to cause a swarm of bees to settle you must strike on brazen vessels." Ovid reports that when Bacchus' cymbal bearing attendants gave forth a clang, he collected the bees, shut them up in a hollow tree, and had as his reward the honey they gathered. Claudian and Virgil both mention the playing on brazen vessels, and the custom is as old as about 500 B.C. at least, as several writers refer to it.

In the eighteenth century the curate's fiddle was used as a substitute, and he received, I am not certain by prescriptive right, "a groate for his paines." The custom of tanging is often referred to in general literature, of which the following may be taken as specimens: Coleridge, as is well known, was a brilliant conversationalist, and Hazlitt says of one who delighted in his talk, "He was attracted to Coleridge's conversation as flies to honey, or as bees in swarming time to the sound of a brazen pan." Of Sir Walter Scott it is recorded, "Every old ruin called up a host of associations, just as a bright pan of brass, when beaten, is said to attract the swarming bees."

In conclusion, I may state I never saw the custom practised and I have not come across a beekeeper whose father or grandfather saw or heard of its being indulged in.—D. M. M., Banff.

RAISING QUEENS AND INCREASE.

[6098.] Two reasons for delay in sending the further article promised upon the matter dealt with in B.B.J. of October 12 are want of time for writing, and waiting to see if any special questions were asked in regard to it. To be candid with your readers, I must confess to being a bit of an "experimenter," and for this reason I have had to pay the price of such methods by noticing the big

"takes" of others, while having to feed my own bees for approaching winters. It thus happens that when one sees in your pages accounts of "wintering five or six lots of bees in one hive, divided only by perforated dummies," "hatching chickens above brood-nest," "baby nuclei," etc., etc., all given as "new," it makes me cast a look on old appliances and feel amused.

As necessity is generally the mother of invention, I was at first practically forced into the circumstances under which my experiments with "baby nuclei" were begun. I had bought six imported Italian queens from advertisers, whose promises certainly led me on to serious trouble, for within a very little while four out of the six stocks headed with these queens had developed foul brood, which rapidly spread through other stocks, until I was left with a solitary one in a corner of the apiary. Thirty-five colonies of bees all gone, and twenty hives with them; so the following summer, with my only remaining stock, and fifteen empty hives, I made a fresh start. These fifteen hives were packed away in the outhouse of a garden about a mile distant from my house, while my solitary stock made me feel desolate in the extreme. However, as the "bairnies" wanted honey, I decided to run it for that article, and divide in July; but this was not to be, for man proposes and bees disposes, and so in the first week in June I noticed in the hive all the ordinary symptoms of swarming. Thus, between an almost insatiable desire to increase, a wish to please the children, and the fact of the empty hives being at such a distance, I was for a while at a loss as to the best course to adopt.

Just at this time I had a large quantity of discoloured empty sections, left from previous years; and a bright idea, as it proved, struck me, viz., to put two or three of these sections into each of some small boxes with a few young bees, and one of the surplus queen-cells I found in the hive, and see what would happen. So the next evening found me busy with these operations. The result was marvellous. First the parent hive went on its way rejoicing, and gave me 61 lb. of honey. Eight out of ten of these little lots hatched out their queens, which in time began to lay, and all without a single loss. Now, what was I to do with eight laying queens, each confined with not more than 200 or 250 bees on three sections? Clearly it was impossible to get them on in strength sufficient to go through the winter, and, as all appeared good queens, I confess to being a little befogged. However, it worked out thus: All was allowed to go on until July 14, when the main honey-flow ceased, and the surplus-chambers of the parent hive were removed. This stock (on twelve frames) was at the time "boiling over" with bees, and so it was divided into nine lots. Four combs with the queen left, and the other eight were put one into each of eight boxes and closed up for twenty-four hours. Next evening I took these lots, together with the little boxes containing the queens, to my orchard a mile away, and there in eight of my empty hives I made up nuclei by putting one frame to each, also a queen, in the following manner:—First I inserted the frame of bees and brood from parent hive and covered up nicely, then into a frame with half-sheet of foundation I transferred and fitted the three sections, containing a little brood and queen, from one of the tiny boxes; this was placed in the hive at the back of first comb, and a full sheet of foundation in front, thus forming a good frame-nucleus. Each lot being served in the same manner, everything was left until Bank Holiday, when they were brought back for careful feeding and nursing for winter. The net result of this experiment was that out of the nine lots seven came safely through the winter, and gave a good account of themselves the following year.

This was my experiment; now for my subsequent method. During the winter which succeeded, I carefully thought out how best to develop some practical method from this crude idea, and consequently made a number of small boxes which would hold three frames each, such as I have already described, and shaped like an ordinary bee-hive, with single walls and "Cowan" shaped roofs. As the spring comes on I carefully note my best queens, i.e., those which prove to be most prolific, and throw the more active and quiet workers; also wait until signs of swarming have well developed in some of the stocks, then, after a thorough overhauling, when all queen-cells are removed, also queen, and a frame of hatching eggs from the best queen is inserted (dog-toothed, as previously mentioned), things are allowed to go on for another week or ten days. On the twelfth day from the "setting of eggs" I bring out my small hives, into each of which is brushed about 200 or 300 young bees from one of the stocks, also in the middle frame is tied a piece of nearly hatching brood, and all is fastened up and left for twenty-four hours, when the queen-cells are pinned between top-bars of the small frames and the entrance opened. Things are then left for another three days, when the cells, which should be emptied of their late occupants, are thrown away, the hives covered up, and results awaited as told in previous article.

There is not much more to say, except

that by this method queen-cells are utilised which would otherwise be wasted, large increase can be obtained without the usual loss to other stocks, and queens raised under the very best natural conditions. These, of course, are important items.—AMATEUR, Bristol, November 6.

SELLING HONEY.

A PRACTICAL SIDE OF THE QUESTION.

[6099.] May I be allowed to express my views on the Tariff Reform question in relation to bee-politics, looking from the Free Trade side? The Protectionist side as propounded by "Business, Cornwall," is not calculated to further the cause of bee-keeping, and is opposed to the teachings of our lecturers, who state in effect, for the purpose of inducing people to keep bees, "That no minor industry pays so well as bee-keeping in proportion to outlay involved." I believe that the average expenditure on each hive by the average bee-keeper, after his initial outlay, does not exceed 2s. 6d. per annum; also, that a large percentage of bee-keepers can produce 50 lb. of honey from each hive by good management. This, at 5d. per lb., realises £1 0s. 10d., that is, over 800 per cent. on the outlay. I make no comment. Not being aware that "many persons try to live by keeping bees," I thought that man could not live by bees alone. Nor do I recollect ever seeing the advice given, "Try to obtain a living by keeping bees." However, it is fairly certain that if there are some who manage to *exist* they are a struggling minority compared to those who chiefly go in for bee-keeping as a hobby, and are likely to join the great multitude in the "survival of the fittest" process. There is apparently a contradiction in the above statements, but it disappears when we bear in mind that there is a limit to the number of hives that will receive good management. This limit is a variable quantity in different individuals, and it does not follow that because £5 is expended on forty hives, 2,000 lb. of honey will be obtained, nor that £40 would be realised for that weight of produce if obtained, because the selling capacity of each individual also varies, and only proves that theory and practice do not readily combine. Personally, I keep more stocks than I can manage properly, and average 10d. per lb. for all my produce properly prepared for market. My sales could be doubled if double the amount was produced; but I do not care to increase my output, because more than 5d. per lb. in bulk is required by producers. I believe that most people who sell at a low rate are obliged to do so in order to dispose of their produce; they know not the honey merchant, and many who do know look upon him as a bantering individual. Does it not follow that the cheaper one sells his produce the greater the demand, and more the demand the greater the supply, which means more bee-keepers? Bee-keeping is essentially a hobby—moreover, a poor man's hobby—and the amount of good derived from it cannot, and should not, be measured, by the sordid gain he obtains; nevertheless, it can be made a paying hobby, and, if so made, should be looked upon as an auxiliary to one's income, and not from the materialist's view of multiplication and monopoly. I enclose name, etc., for reference, and sign DESUNT CETERA, November 11.

(*Correspondence continued on page* 456.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Latchford, whose apiary is illustrated on opposite page, is another bee-man who, after beginning with straw skeps, was not long in appreciating the advantage of modern methods. In the following "notes" we are also glad to have further testimony with regard to the benefits derivable from beginning at the right end by adopting the "Standard" frame at the outset. He says:—

"I began bee-keeping in 1904, having caught the bee-fever in the month of May that year, and it has not left me yet. My first start was purchasing a stock of bees in a straw skep for 25s., and from this I got two swarms that year, both of which I was fortunate enough to see come off, and more so in safely securing and hiving them. It was to me a novel and splendid sight to see the air filled with my own bees, and one I shall never forget; but to my great regret both lots died the following winter through starvation. This mishap rather disheartened me; but having still the parent hive left, I plucked up, and, by purchasing another swarm the following year, was again a full-blown apiarist. The new bees, however, taught me a severe lesson, viz., by proving that they had stings, and knew how to use them freely whenever I or anyone went near their hive, even if only passing by, and when I attempted any manipulating these bees became so vicious as to sting even the garden posts and anything within reach. So great did this nuisance become that I was rather glad when they died the following winter through mice getting into the hive and eating them and their stores. The other hive swarmed that year, and I housed the bees safely in a frame-hive made by myself. Here let me caution beginners with bees against starting at the wrong end by not using the standard frame, and making all parts of hives

interchangeable. A wrong start in this direction causes more tromble, disgust, and at times disaster, than anything about bees and bee-keeping that I know of. It was my misfortune to make a few hives from a wrong pattern lent me by one who ought to have known better.

"I have not greatly extended my apiary since, finding six or eight hives as many as I can look well after. My bees are located in an allotment garden about a quarter of a mile away from home, and, being by occupation a gas inspector, my leisure time is very limited, so that I find it difficult to give the apiary so much attention as it ought to have. Ours is bees have not done at all well on the moors. But the bee-keeper's motto is 'Hope on.' I did not expect my small apiary would have found a place in your valuable paper, which I look forward to with pleasure. The figure seen in photo (taken by a young friend in 1904) is yours truly, holding a little canine friend in my hand, who would not be left out on any account. Now, however, while I am writing, he is lying at my feet a full-grown dog, and a faithful companion in my bee-rambles, which are many.

"My good wife, too, also takes great pleasure in helping in any way she can with the bee-work, especially in looking

MR. GILES LATCHFORD'S APIARY, HURDSFIELD, MACCLESFIELD, CHESHIRE.

rather a poor district for honey, and in consequence I have had to take a few hives farther out into the country, where I have a friend who is a large farmer, and is good enough to give them room at his place, where the bees have done well; in fact, I have taken prizes at shows for honey gathered at this out-apiary. Ever since I commenced beekeeping, the first of August generally finds me with hives packed up in a waggon and on my way to the moors, where the bees and myself have a good time when weather is favourable, heather-honey forming my main crop. But for the past three seasons the weather has been so wet and cold that the after honey for home use. The frame-hives to my left, including that on which the frame rests, have been made by myself. The one to the right was purchased from an advertiser in your paper. The skep seen in photo was not occupied at the time, the bees having been cleared out by the mice, which infest my place in winter; they also destroyed two other skeps in the house seen in background. I protect the tops, but they nibble through the straw sides of the skeps, and eat both bees and honey. I have caught as many as seven mice at a time, but have never yet caught one alive in the trap; they must die immediately. Of course, they are not the

ordinary domestic mouse. With regard to my honey market, I have a splendid one, and can dispose of my produce readily.

"I cannot conclude without wishing every bee-keeper a successful season next year, along with freedom from foul brood, which, I am glad to say, I have never yet seen."

CORRESPONDENCE

(Continued from page 454.)

TALL VERSUS SQUARE SECTIONS.

[6100.] Referring to Mr. L. S. Crawshaw's criticism (6086, page 442, B.B.J., November 9) of my article "Tall v. Square Sections," I wish first to thank him for bringing forward the fact that $4\frac{1}{4}$ in. square sections have been and are used in hanging section-frames similar to those made for holding 5 by 4 in. I confess I did not know this. Comparing these two, I think the former is preferable, because it has most of the good points of the latter without its drawbacks. There is, however, this disadvantage in the square section, viz., that either a frame shallower than the standard shallow-frame would have to be used, or a very thick top-bar used in the section-holder, when producing comb-honey in the extracting super. But, if Mr. Crawshaw will read my article again, he will see that I plainly stated that "I referred all through to 5 in. by 4 in. by $1\frac{3}{8}$ in., used with Gray's section-frames on the one hand, and $4\frac{1}{4}$ in. by $4\frac{1}{4}$ in. by 2 in. on the other," which, I think, should sufficiently explain the point I was arguing about.

Why should it matter what shape the section is, so long as it holds sixteen ounces of honey when full, and is convenient to handle? The actual shape of the section was not the real point under discussion, and the "sundry incidental matters," which Mr. Crawshaw regards as of small importance, I consider to be *all important*. Surely, incidental matters which affect either the quantity or quality of honey produced, and convenience and labour in handling, are of more importance than the mere geometry of the article. I merely put down facts, giving reasons for those facts where I could, to prove that one particular section, by reason of the methods employed in working it, was superior to another. My head is perhaps too thick to comprehend the meaning of the criticism on advantage No. 2. When I say "tall section-super," of course I mean the ordinary shallow super in which tall sections are put. The super may be filled with sections, or partly sections and partly shallow-frames, with or without drawn-out comb. — STANLEY WRIGHT, Macclesfield, November 13.

VILLAGE BEE CLUBS.

[6101.] I see in B.B.J. of October 19 (page 412), Mr. Pugh is said to have stated that the Wootton-under-Edge Bee Club "had never been affiliated nor of any help to the County Association." Having been hon. sec. of the bee club referred to for several years I cannot allow that statement to go uncorrected. I note that our friend Mr. Burtt, of Gloucester, contradicted Mr. Pugh's statement at the time, but it may be well to give the actual facts. I cannot now say from memory how many years the W.-u.-E. Bee Club was affiliated to the County Association, but it lasted during the whole of the County Association's existence; and, after that, we were affiliated to the B.B.K.A. for some time. This makes me wonder where Mr. P. got his inaccurate information from.

Whilst writing, I may also be allowed to say that my experience leads me to think that a deal of good would result from establishing village bee clubs in suitable districts. I well remember the happy times we used to have in the small room at the Town Hall once a month and talk "bees" for a couple of hours during the winter evenings. Then, as the weather got warmer and the days became longer, we would arrange to visit the apiary of some member, and such glorious times we had among the bees. Personally I shall never forget the pleasant enjoyment afforded to all. Then, the honey shows, generally held in August, and the keen competitions thereat, were always interesting. For myself, I have not seen such shows of honey since. The honey, too, in this part of Hampshire seems to me totally different from what we used to get on this side of the Cotswolds.—ARTHUR J. BROWN, Burton, Christchurch, November 8.

EXHIBITS AT BEE & HONEY SHOWS.

QUEEN BEES DAUBED WITH PAINT.

[6102.] Now that we have reached the end of "bee and honey shows" for the year, I should like to ask the opinion of our Junior Editor, if he will be good enough to express it, and also of other gentlemen who officiate as judges of such shows, of an exhibit we frequently see on the show-benches in Lincs. I allude to an observatory hive with the *queen-bee daubed with paint*. I believe this was first done, or, at least, the first time I heard of it, when the "Royal" Show was held at Carlisle, some ten or more years since, but whether it has been practised since at our large shows I do not know. Such an exhibit has not come before me when I have acted as judge, and for this reason I am anxious to know the opinion of others, for I have my own views on the matter, which I will not here state. All I will say is

that I think it is very misleading, as the following fact will show:—An observatory hive with a daubed queen was awarded the 1st prize at one of our local shows this summer, and, during a lecture in the afternoon, when I handed round the queen from the lecture hive, a gentleman asked me what breed of bees she was of. On telling him she was pure English, he said this is what he was told about the bees in the show, "but this queen is quite different in colour from that one." No doubt he was a novice, or he would not have asked such a question, but how misleading the daubed queen would have been to him had there been no lecture and no natural queen on view.—R. GODSON, Hon. Sec., Lincs B.K.A., Tothill, Alford.

[Our opinion of queen-bees being shown "daubed with paint" in any observatory hive staged at a show whereat we were entrusted with the duties of judging, would have been unmistakably expressed on the exhibit itself at the time. With regard to the "Royal Show at Carlisle," the last held there was in 1902, and we officiated there as judge. No other "Royal" show has been held in Carlisle since 1880, so we cannot speak of what occurred over twenty-five years ago. We should have thought that any competent judge would immediately disqualify an exhibit in which such a cruel disfigurement of the queen-bee was displayed.—EDS.]

MAKING SOFT BEE CANDY.

BROTHER COLUMBAN'S RECIPE.

[6103.] Enclosed is a sample of candy made exactly according to Rev. Brother Columban's recipe, except that it is not medicated. Please say if same is suitable for use. My grocer assures me that the loaf sugar used (which cost 2s. 11d. the stone), is pure cane. My wife has made candy many times with success, and thought we would try this, as it contains honey, and we considered that it would be better candy. You will no doubt have noticed that the amount of water (3 quarts to 15lbs. sugar), is about twice the usual quantity of water used in making ordinary candy, and it makes me wonder if this is an error of printer? Twenty minutes we found was not sufficient to bring the syrup to proper consistency, and had to boil another twenty before it was thick enough to make into a soft ball between the fingers in testing. Candy would not harden any more than sample sent you. My wife, therefore, replaced candy on the fire again to-day, and boiled for over half an hour, but the consistency remains the same as before. The honey used was my own which had candied, but it was re-liquefied, so there is no question as to its purity. My wife was most particular in following the instructions given in your pages by Br. Columban very carefully, and is greatly disappointed with the result. I have now bought "Tate's" loaf sugar to make the ordinary soft candy. Hoping others who have tried this receipt have had better luck than myself,—R. T., Jordanstown, Co. Antrim, November 12.

[The sample of candy sent, while very good in other respects, is too thin for use; in fact, it would run down among the bees if placed above frames of brood-nest. We are glad, however, to get the above particulars, and are sending the sample on to Br. Columban, who will no doubt be good enough to forward his opinion to us for publication. In view of this it might be well to defer making a fresh lot from Tate's sugar (which is not guaranteed pure cane), until you hear what our revd. friend has to say.—EDS.]

ACCIDENT TO THE REV. H. NEWMAN.

Readers who noticed the brief reference made on page 450 last week to an unfortunate accident which befel Mr. Newman, will join with us in deeply sympathising with the reverend gentleman on reading the following, which came to hand while we were preparing for press:—

"6, Mortimer Street,
"Portland Place, W.,
"November 14, 1905.

"Dear Sir,—I am afraid my accident may have caused some inconvenience to some of my correspondents; but it has caused me still more. I have been compelled to have my right eye removed. I ran into a gate in the dark with my glasses on, which latter broke into the eye. I hope to be home again about the 21st, and trust I shall not have to give up bee-keeping altogether.—Yours faithfully,

"HERBERT NEWMAN,
"Hon. Sec., Bishop's Stortford B.K.A."

Queries and Replies.

[3959.] *Controlling Swarming.* — May I trouble you for an answer regarding the following? In this district when a swarm leaves the hive, and the beekeeper does not wish for increase of stocks, he first secures the swarm in a skep, then opens the parent hive, cuts out all queen-cells, and afterwards returns the swarm, killing the old queen as she runs up the board into the hive. I therefore ask:—Is this right, or should one queen-cell be left? They tell me that previous to a swarm leaving

the hive there has been a young queen hatched out.—A. M., Kincardine-on-Forth, November 6.

REPLY.—In the first place, you may take it from us, that it is an entire mistake to say that a young queen has hatched out before the swarm issues headed by the parent queen. It does sometimes happen that, owing to adverse weather, the first or prime swarm is delayed for a few days, and this delays the usual period of eight or nine days before the second swarm comes off; but, ordinarily, the most forward of the young queens is hatched out in from seven to nine days and is heard "piping." This sound indicates the condition of matters inside the hive, and next day—if weather is suitable—the second swarm issues headed by the young queen mentioned above. Then, the next strongest queen hatches out, and a day or so later, all the remaining occupants of queen-cells are cast out dead. Anything contrary to the above is caused by some abnormal conditions which can only be understood by the experienced bee-keeper.

[3960.] *Uncapped Stores for Winter Food.*—I should be very glad if you will advise me *re* the following: — On October 6 I united a driven lot of bees to a weak stock in frame-hive, and fed up with syrup as directed in the "Guide Book." The bees appeared to fill all the eight frames left in the hive with the syrup, but did not seal the cells, although I continued to feed them. A week ago I discontinued the syrup and placed a 2-lb. cake of soft candy over the frames. In view then of the present condition of the stock in question, will you please tell me if the bees may be considered safe in the matter of food until next spring, or shall I supply more candy later on, and at intervals during the winter? I send name and sign—Q. X., Beccles, November 8.

REPLY.—The pity is that the bees could not have been united earlier, it being well known that they will not cap the food over in cold weather, and it tends against safe wintering for bees to be compelled to cluster on combs filled with uncapped food. In view of this, you had better give no more candy, so that the bees — by consuming the syrup—may, in some degree, lessen the disadvantage we have named above.

[3961.] *Comparing Notes with Bee-keepers —Experts' Certificates.*—1. I am in the unfortunate position here of not knowing a brother bee-keeper in this locality, and I notice in the B.B.J. of November 2 (page 436), a communication headed "A Bee-note from Argyllshire," and signed "Medicus, Gourock." Your correspondent may, of course, keep his bees in the county named, but Gourock is in Renfrewshire, being only three miles from here, and having only started bee-keeping this season, I would like very much to compare notes with some one in the district. If your correspondent "Medicus" would kindly send me his address on a postcard I should be very pleased to see his apiary and have a chat with him. There is another bee-keeper here who works on the old-fashioned "Stewarton" system, and, consequently, very little information on practical up-to-date methods can be gleaned from him. I have read nearly all the good books on apiculture, and possess most of them, but it is nice to exchange views with someone in the district. 2. I should also like to obtain some information regarding the examinations of the B.B.K.A. for experts' certificates, how to obtain particulars for same, and what course of study is required? Then, with regard to another point, I have never seen a comb infected with foul brood, and this makes me ask:—3. Would it be possible for you to send me a piece? I am working on the "W.B.C." system, which, to my mind, is perfection. The alighting-boards of my hives are fitted with triangular strips of wood nailed on and reaching from top to bottom of the boards. These strips give the bees a good foothold on stormy days and prevent them from being blown off after alighting. Enough space is left between each span to allow rain to drain off, and the alighting-boards are thus kept dry. I have hives painted aluminium colour, which stands the weather far better than ordinary white-lead paint. I am wintering seven strong stocks, but hope to double this number next year. Finally, allow me to say I have derived great assistance from the "Guide Book," and I cannot imagine any bee-keeper being able to manage without a copy.—D. M. P., Greenock, November 7.

REPLY.—1. We will draw the attention of "Medicus" to your request, and send him your full name and address. 2. For information regarding the B.B.K.A. exams., application must be made to the secretary, Mr. E. H. Young, 12, Hanover Square, London. We may, however, mention that there are no fixed arrangements for holding exams. in Scotland, and, in consequence, it might be necessary for candidates to attend some show at which a duly-qualified examiner was present. Thus, at the "Royal" Show, held at Carlisle, several Scottish candidates were examined for the third-class certificate. 3. We have sent a few samples of diseased comb in special cases, generally for scientific and microscopical examination, but it is obviously very necessary to be extremely cautious in this; while to distribute specimens to amateur bee-keepers would be not only unwise but dangerous.

[3962.] *Locating Large Apiaries Near to Roads and Dwellings.*—I should be grateful if you would advise me, as I am face to face with possibilities not previously thought of. I am negotiating the purchase of stocks of bees to bring my total up to twenty or twenty-four colonies, and wish to keep them here till I can find a location suitable for a larger number, and so I ask: Do you think it safe to place so many bees here, bearing in mind the following particulars: I occupy our own property on the outskirts of the village, and a wall seven to ten feet high divides the garden from a frequented convenience-way for general traffic. To make the position clear, I have enclosed a rough plan showing situation of apiary. There are a number of children about, but they cannot approach or molest the hives. I am impelled to trouble you for advice because of having just heard of an Essex bee-keeper whom the authorities obliged to move his apiary (sixty hives) from the village to a location not less than a mile distant. I believe the reason was that his apiary was easily accessible to children. I have to decide whether I will purchase this week, so I should be glad of an early opinion.

I have only taken the B.B.J. for a few weeks, and thereby I have lacked valuable assistance; but, having noticed frequent complaints of the business methods of advertisers, also add a word of complaint as a victim. I have spent a good many pounds with one gentleman. Remittances were in some cases not acknowledged, and enquiries (stamped addressed envelope enclosed) were ignored, and the goods arrive weeks after they were due. I asked for the balance of account in "Ingal," but have heard nothing of it so far, and perhaps it may arrive in time for spring stimulation. These business methods will stimulate me also to do things for myself that previously I trusted to advertisers to do for me. Name, etc., enclosed.—NAPTHOL, Stoney Stratford, November 8.

REPLY.—Whatever risk there might be during the busy working season of the bees, no harm will follow removal of the hives to the location marked on plan at the present time if ordinary care is used. In fact, it will be quite safe until February next, because the bees are seldom on the wing, and never in great numbers, until that date. But, with regard to the place being adopted as the permanent location for a large apiary as proposed, we consider it too close to the public roadway and cottages shown for perfect safety. Much would, no doubt, depend on the system of management followed, and the bee-keeping owner's experience, which, in your case, we take to be limited; and, with the public roadway near by, along with the row of cottages, with what we take to be the cottagers' gardens in the rear, where on washing-day's the wife's household linen would have to dry, there would be "trubble 'round for sartin," as the old negro said. Seriously, we may say that large apiaries, unless skilfully and very carefully managed, should never be located near to public roads or dwelling-houses. We note your complaint about the bad business methods of some advertisers, and if furnished with the name of the person or persons referred to, we should be able to form a more accurate opinion on the case than otherwise, believing, as we are perforce compelled to do by experience, that our advertisers are frequently "more sinned against than sinning," as the phrase goes."

[3963.] *Sending Honey in Tins by Rail.*—I ordered some honey from one of your advertisers, who hails from Cambs., and it was sent by train in a tin quite unprotected; consequently, it arrived in a disgracefully messy condition—the lid off, and a good deal of the honey had leaked. I mentioned the matter to the seller, and, subsequently, as the honey was of excellent quality, I ordered 28 lb. more. This time it arrived in two 14-lb. tins wrapped in brown paper, and tied round with string. The tins were dented, one lid off, and the whole package smeared thickly with honey and leaking in a considerable quantity. As you occupy an influential position in connection with the bee-industry, I have thought it well to report the matter, as such experiences, if at all common, are likely to do considerable harm to the industry. It should be made quite clear that it is not practicable to send tins of honey by rail without some sort of protection.—J. D., Southgate, November 9.

REPLY.—The advertiser in question can hardly be experienced in packing honey in tins for travelling by rail, or he would surely have taken more precautions for safe transit than indicated above. No railway company would hold themselves liable for lids of tins that come off or can be easily prised off on the journey. The rule is to send tins in rough boxes that neither allow lids to be got at easily, nor tins to be damaged.

[3964.] *The "Rymer" Honey-board and Queen-excluder.*—As a constant reader of the B.B.J., and only a novice with bees, may I ask for a reply to the following question? I am thinking of trying the "Rymer" honey-board on my hives next year. Shall I have to use excluder-zinc between the honey-board and section-rack? I should like to know for certain about this before obtaining the above-named appliances.—W. F., Winkfield, November 10.

REPLY. — We do not think that Mr. Rymer intends the honey-board (known by his name) to entirely supersede the use

of queen-excluder, but rather as part of his system of preventing swarming, and of avoiding brace-combs between surplus chambers and brood-nests. As a matter of fact, we know of bee-keepers who use both the honey-board and a queen-excluder at one time on the same hive. You might place the honey-board above brood-nest when adding your first box of shallow-frames, or rack of sections, as the case may be; then, if brood is found in the surplus-chamber, use queen-excluder when adding a second super above the first one.

[3965.] *Suspected Queenlessness in November.*—I began bee-keeping this year with one stock in a hive holding ten frames; they did not swarm, and I do not know how old the queen is, but I got 36lbs. of surplus honey from them. On October 1, when packing bees down for the winter, and spacing frames as advised in the "Guide Book," I saw there were two frames in which about a third of each had sealed brood on both sides. The hive was full of bees, every frame crowded, and also some drones. On October 21 the bees were flying just the same as in summer, and a few drones, but not so many. My wife tells me that they fly every day when it is fine. I spoke to a bee-keeper (who has proved himself a good friend to me), and he thought that the queen must be lost, and advised me to write to you. I might say bees are on nine frames, five of which have sealed food from top to bottom, and the others almost sealed except where the brood was; I have not uncovered them since October 1. Will you kindly let me know in this week's B.B.J. what you think of this? I have been a subscriber to your journal since September, 1904.—A. J. H., Chadwell Heath, November 13.

REPLY.—There are valid grounds for the fears expressed by your friend that the stock is queenless, it being quite abnormal for drones to be flying in November. We should advise a careful examination of the frames the first time the bees are on the wing, and if no queen is found, it may be possible to purchase a fertile queen for introduction to the colony.

STRAY SWARM 100 YEARS AGO.

The *Observer* is, for the present, publishing every Sunday with its ordinary issue a facsimile of its impression of the same Sunday 100 years ago. In the *Observer* for October 27, 1805, the following paragraph appears:—"An immense swarm of bees was lately seen to alight on the summit of the spire of St. Nicholas Church, in Liverpool, where they remained from five in the afternoon till next morning, when they took their departure. Their appearance, at first alighting, nearly resembled a thick smoke issuing out of a chimney. They are supposed to have come from Flintshire, and to have crossed the immense Æstuaries of the Dee and the Mersey."

Bee Show to Come.

November 15 to 18, at Plymouth. — Honey Show, in connection with Plymouth Exhibition (attendance 1904, 61,000); 15 Open Classes for Appliances, Honey, Wax, Confectionery, etc. Gold, silver, and bronze medals, handsome diplomas, money prizes, etc. Schedules from A. D. Breeze, Chartered Secretary, Exhibition Offices, Plymouth. **Entries closed.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

A BEE-MAN (Kent).—Lavender as a Honey-plant.—You may rest assured that where lavender is grown in quantity, hive bees work on it busily and continuously. We have seen a border of the plant thirty or forty yards literally alive with bees in July and August.

PERU (Cheshire).—Bee-keeping in Peru.—We are unable to furnish you with information regarding bee-keeping in Peru. Perhaps some reader better informed than ourselves may be able to assist our correspondent.

W. E. C.—Candy-making.—Your sample is very poor indeed, and quite unsuitable for bee-food. It is not nearly well enough boiled, and as granular as unboiled wet sugar. You surely cannot have followed printed recipe from "Guide Book" in making.

Honey Samples.

H. WOODWARD (Cambs).—Your sample is very good in quality as a granulated honey, and should be well worth 56s. per cwt.

J. H. (Weobley, R.S.O.)—No. 1 is a nice sample of heather-honey. It is too mild in flavour and too light in colour to be altogether from *Calluna vulgaris*, but as many persons in the South prefer the milder-flavoured heather-honey, it would, no doubt, find a ready sale in some quarters, especially that in sections. A small advertisement in our prepaid column would probably find you a customer. No. 2 is, we think, almost wholly from clover; it is good in colour and consistency, but it has a slight "tack" in flavour that reduces its value somewhat as a table honey.

******* *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, 15th inst., Mr. T. I. Weston occupying the chair. There were also present: Dr. Elliot, Messrs. R. T. Andrews, W. Broughton Carr, J. B. Lamb, W. F. Reid, E. D. Till, E. Walker, F. B. White, and the secretary. Letters expressing regret at inabilty to attend were received from Miss Gayton, Col. Walker, Messrs. L. Belsham, T. Bevan, W. H. Harris, and R. Godson.

The minutes of the previous meeting were read and confirmed.

Four new members were elected, viz.: Miss Nancy Pleydell Bouverie, Broxholme, Ripley, Yorks.; Miss Georgina M. Hallows, Alfriston, Ewell, Surrey; Mr. John Roper, 21, Oak Road, Slade's Green, Erith, Kent; Mr. Thomas James Thorpe, The Gardens, Brackley Lodge, Brackley, Northants.

The report of the finance committee, presented by Dr. Elliot, gave particulars of receipts and expenditure to date, and was formally approved.

Reports upon examinations in Cheshire and Huntingdonshire were received, and, in accordance with the recommendations of the examiners, it was resolved to grant certificates to the following candidates:—Messrs. W. H. Brown, George Hills, J. Huxley, C. J. Mapey, E. Pidduck, and J. Sibson.

The secretary reported that the names of twenty-seven intending candidates for second class expert certificates had been sent in, and brought forward a list of the "Supervisors" nominated for approval by the Council.

The Association having been requested to undertake the management of the Hive and Honey Department of the Royal Show, to be held at Derby in June, 1906, the draft prize schedule was arranged for submission to the Council of the R.A.S.E.

The next meeting of the Council will be held on Wednesday, December 20.

PLYMOUTH EXHIBITION.

AND ANNUAL SHOW OF THE DEVON B.K.A.

These two competitions were held in the Drill Hall, Plymouth, from 15th to 18th of November. Although held late in the year the result was a great success in every respect, the entries numbering nearly 200. So large and excellent a display of honey has probably never been staged before in the West. The classes for light honey were exceptionally good. In the county classes the exhibitors exceeded the numbers of previous years.

Unfortunately, in both competitions, several entries for comb honey in sections were disqualified, owing to overlacing, but in all these instances the sections were shown in manufactured section-cases of one pattern.

Lectures on bee-keeping were given in the afternoon and evening of each day by Mr. John Brown, Launceston.

The secretarial work was carried out by Mr. F. W. Palmer, Devonport, who acted for the county secretary for the show. The judges were Lieut.-Colonel H. J. O. Walker (Budleigh Salterton), and Mr. E. E. Scholefield (Heathfield, Chudleigh), who made the following awards:—

Collection of Hives and Appliances.—1st, J. T. Burgess and Son, Exeter.

Complete Frame-hive for General Use.—1st and 2nd, J. T. Burgess and Son; 3rd, James Lee and Son, Highbury, London.

Complete Frame-hive, price not to exceed 10*s.* 6*d.*—1st, James Lee and Son; 2nd, Robert Furse, Woodbury, R.S.O.; 3rd, J. T. Burgess and Son.

Honey Extractor.—1st, Burgess and Son; 2nd, James Lee and Son; 3rd, Burgess and Son.

Display of Honey.—1st, W. Herrod, Luton; 2nd, James Lee and Son; 3rd, P. B. Govett, Tideford.

Twelve 1-*lb. Sections.*—1st, W. Woodley, Beedon, Newbury; 2nd, James Lee and Son; 3rd, M. Hamer, Llandilo Bridge, S. Wales.

Twelve 1-*lb. Jars* (*Light*) *Extracted Honey.*—1st, W. F. Trineman, St. Stephens-by-Saltash; 2nd, W. Herrod; 3rd, J. Trineman, Lostwithiel, Cornwall; v.h.c., C. Hood, Bridgend, Glam., and Frank Williams, Saltash; h.c., John M. Stewart, Castle Douglas, N.B.; Miss Penrose, Ladock, and James Lee and Son.

Twelve 1-*lb. Jars* (*Medium or Dark*) *Extracted Honey.*—1st, W. E. Brooking, Marlborough, Kingsbridge; 2nd, Rev. G. Grylls, Sheldon Vicarage, Honiton; 3rd, John Edwards, Callington, Cornwall; v.h.c., M. E. May, Stanerton, Totnes, and James Lee and Son; h.c., Joseph Boyes, Cardiff, and Geo. W. Kirby, Knowle, Bristol.

Twelve 1-*lb. Jars Granulated Honey.*—1st, J. Pearman, Penny Long Lane, Derby; 2nd, Joseph Boyes; 3rd, J. M. Cann, Brixham; v.h.c., E. C. R. White, Newton Toney, Salisbury; h.c., James Lee and Son, and Miss Rowe, Tavistock.

Single Shallow-frame of Comb Honey.—1st, E. C. R. White; 2nd, Frank Williams; 3rd, F. W. Palmer, St. Budeaux, Devonport; h.c., W. Herrod and W. J. Cavey, Launceston.

Two lb. Wax—1st, Fred. Harris, High Ferry, Sibsey; 2nd and 3rd, E. C. R. White; h.c., J. M. Cann and James Lee and Son, London.

Two lb. Wax (*to be shown in shape, quality,*

and package).—1st, J. Pearman; 2nd, W. Herrod; 3rd, D. George, Bridgend; h.c., G. W. Kirby.

Interesting and Instructive Exhibit.—1st, W. Herrod; 2nd, James Lee and Son.

CLASSES FOR MEMBERS OF DEVON B.K.A. ONLY.

Six 1-lb. Sections.—1st, J. Seldon, Umberleigh; 2nd, H. Patey, Kingsbridge; 3rd, F. J. Goss, Sidmouth.

Three Shallow-Frames of Comb Honey.—1st, H. I. Fripp, Elburton, Plymouth.

Single 1-lb. Section.—1st, W. E. Brooking, Kingsbridge; 2nd, J. Seldon.

Six 1-lb. Jars (Light) Extracted Honey—1st, W. F. Trineman, St. Stephens-by-Saltash; 2nd, H. B. Spencer, Bere Alston; 3rd, J. Salt, Saltash; v.h.c., H. Patey.

Six 1-lb. Jars (Medium) Extracted Honey.—1st, W. E. Brooking; 2nd, J. Hillman, Tiverton; 3rd, J. N. Kievill, Bideford; h.c., C. Squire, Mortehoe.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, Miss M. Pittis, Uplyme, Devon; 2nd, R. Furse, Woodbury, Devon.

Six 1-lb. Jars Granulated Honey.—1st J. M. Cann, Brixham; 2nd, F. Phillips, Thorverton; h.c., C. Squire.

Beeswax.—1st, J. M. Cann, Brixham; 2nd, J. Seldon; 3rd, F. W. Palmer, St. Budeaux, Devonport.

Display of Honey, Wax, etc.—1st, F. W. Palmer, St. Budeaux, Devonport.

Frame-hive made by an Amateur.—1st, F. J. Richards, Plymouth.

Two 1-lb. Sections.—1st, J. Sheldon.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears*

NOTES BY THE WAY.

[6104.] *Square versus Tall Sections.*—The discussion on this subject still occupies a big space in our journal. For myself, I cannot give any definite opinion on the subject, having only tried a small number of the tall sections. I remember sending a few of the latter to make up an order for a gross of sections, and when cheque arrived in payment, it was accompanied with a complaint and a request not to send any more of the "oblong sections, as customers did not like them so well as the square." Now, we honey producers must remember that it is our customers we have to consider; not only so, but if we want good advertisements, a pleased customer is one of our very best, and it costs us nothing for displaying it in print. Therefore, as Mr. Stanley Wright says, in his second paragraph on page 456 (6100): "Why should it matter what shape the section is?" etc. To this I would add: Let us "make haste slowly" in pushing new things. Rather give such a weighty matter as the alteration of what has become a standard size section full trial and consideration before giving it undue prominence. Do not let us forget that the larger bee-keepers, who produce sections by the thousand, have hundreds of racks on hand, and six times as many dividers, and even if the racks may be altered to take the tall sections, the dividers cannot; therefore, on the ground of expense alone, the many among us are not likely to "catch on" largely in working the tall sections. Another point to remember is the vast number of "honey dishes" in use on the tables of consumers. These are made to take a $4\frac{1}{4}$ in. square piece of honey-comb, and the oblong piece (5 in by 4 in.) would not go in it. Again, if every section of honey produced next season was of the tall shape, should we as bee-keepers increase the output (irrespective of expense), and would the British public require or purchase more honey in oblong pieces than in squares? I trow not. Of course, the beginner in bee-keeping can start with new appliances suitable for working the new shape sections, if he so wishes, as cheaply as the old style; but unless he has a long purse and plenty of money to spend, he will require to stick to the style first adopted.

This also raises a thought of those who are contemplating starting bee-keeping as a hobby, and those others who are wishful to make a living out of the industry. The former may be left to his own tastes and devices, as the stake is small; but to the latter the start is a very serious matter; his whole capital may be involved, therefore the best possible advice should be obtained. There is all the difference in the world between success and failure in the "pitch" one gets in the market-place of life; if a good one is secured, half the battle is won, the great hill of difficulty is surmounted, and, given energy, tact, judgment, and health, the future is practically assured and success certain. But unless knowledge of a practical kind is possessed by the beginner in bee-farming, it will be wise not to put all his eggs into the bee-basket, and not to think that because "Jack Jones" made a profit of 20s. from his solitary hive that if he starts with 100 hives that he will clear £100 from them. The same applies to bee-keeping as to other farming—the "few acres," or whatever may be, the pursuit pays well;

but the many will not make an equal average, as the attention and care is divided, and in every living creature there are differences; some do well, others are "ne'er-do-wells," and so it is in bees or chickens, turkeys or pigs. Even in the acres of land, some are much more fruitful to the tiller than others, but the adage of the farmer, "he who by the plough would thrive, himself must either hold or drive," applies with equal force to bee-keeping. I should not advise a beginner whose knowledge is of a limited quantity to go largely into bee-keeping. Rather start with a few hives, and before that read up some standard work on bee-keeping, and then put in practice the advice given therein. Then, if a term—say one season—can be spent with a practical bee-keeper, a fuller insight may be gained than by years of book study, and although this may seem to some to be losing a year, the experience gained will more than compensate for the loss of time, as probably he will find that the stings (when the bees go on the rampage) are more than he can bear, and he is therefore not adapted to the business; or the season may be a poor one, and cause both his employer and himself to be discouraged. To the newly-enlisted recruit to our ranks I say, "Go slowly." Learn to walk before you attempt to run. Finally, do not invest your cash largely at the start, or your enthusiasm may vanish, and you may give up in disgust after suffering heavily in pocket.—W. WOODLEY, Beedon, Newbury.

THOSE TALL SECTIONS.

[6105.] I note (on page 433) the appearance of a new advocate of tall sections, whose cheerful disregard of conservative opinion, and convincing pleading for what he has found to be the better way in the production of comb-honey, should bring tears of joy to the optics of our good friend the Rev. R. M. Lamb, of Burton Pidsea. Mr. Lamb has been somewhat quiescent of late, while doughty champions of *laissez faire* have been tilting at his pet section. That this is due to no lack of pugnacity on his part can be readily understood by those who recollect the exciting time when the reverend gentleman battled, "facing fearful odds," on behalf of his protégé. Beyond an amused interest in the fight, I took little interest in the tall sections, and to Mr. Reid, Balloan, I am indebted for a lead in working them. Mr. Reid, after two seasons' trial of tall sections, has banished the square ones from his apiaries, and, not wishing to keep a good thing to himself, made me try the new variety. After doing so, my only regret is that I did not use them more extensively. It was rather late in June when the new sections came to hand, and, as the square sections were well on the way to completion before their rivals were put on the hives, comparison as to quantity would be rather unfair. In point of quality, however, considering that they were filled during July, the tall sections made an excellent show, decidedly better than the square ones put on at the same time.

The sections I have had measure 5 in. by $4\frac{1}{4}$ in., and, as the ordinary rack with a $\frac{3}{4}$ in. strip nailed all round the top edges just suits them, no one need be deterred from trying the tall sections on account of the cost of extra fittings. The extra comb foundation required is certainly a disadvantage, but this should be more than made up by the difference in cost price of the two sections. The plain section requiring less wood and less workmanship than the bee-way section, with its insets, can certainly be produced to sell at a considerable reduction on present prices. The want of section-cases and correctly-cut glass to suit the new sections is an apparent drawback. I have, however, got over this difficulty by means of the section-wrappers used and recommended by "D. M. M., Banff."

I take it that the real object of glazing is to show off the honey to advantage on the retailer's counter, while protecting it from dust and insects. Used with bee-way sections, these waxed papers look untidy, and the honey is invisible, but with the new section the reverse is the case. The wrapper fits neatly on the plain edges and the comb-surface, being almost touching the transparent paper, shows to great advantage. As waxed papers can be purchased for about 5d. per hundred, the economy is obvious.

It is said that the tall section makes no apparent progress. I expect the real reason is that the average bee-keeper is chary of experimenting, and allows others to form opinions for him. Someone working a few hundred hives graciously condescends to run a single stock for tall sections, finds results unsatisfactory, and straightway a brief notice informs bee-keepers in general, and advocates of a change in particular, that the new section has been tried and found wanting. There, again, is that final triumphant argument in favour of maintaining the *status quo*, to wit, that even should the bees be misguided enough to fill the tall sections, no self-respecting retailer would look at comb-honey unless of a certain thickness and enclosed in a perfectly square section. Speaking for myself, the first retailer to whom I showed my samples immediately contracted for every tall section I had. It therefore seems to me, if the new sections are marketable in fashionable

Strathpeffer, they would not fail to find a purchaser anywhere.

The communication from Mr. Crawshaw (page 442) leaves a doubt as to which side the writer is on, so we must put him on the fence, with, however, a decided leaning towards the square section. When I come to think of it, I am on the fence myself. I neither recommend nor mean to practise wholesale discarding of present fixtures, but I *do* plead for a fair all-round trial of the new section. Suppose you invest in a small parcel of them, and a couple of dozen separators. Your present racks, slightly heightened, will enable you to decide for yourself whether the tall section justifies the encomiums of its friends or the censures of its enemies.—J. M. ELLIS, Ussie Valley.

MAKING SOFT BEE CANDY.

BROTHER COLUMBAN'S RECIPE.

[6106.] Referring to the letter of your correspondent "R. T., Co. Antrim" (6103, page 457), in last week's BRITISH BEE JOURNAL, and in reply to your request, I may say that, without being able to judge if this is his only mistake, I think your querist has not boiled his sugar on a sufficiently brisk or hot fire. This is very important, and any confectioner will understand it. The boiling should be over in less than half an hour. When the candy has once been left to cool, and fails to come to the proper consistency after stirring, it is generally useless to boil it again. The sample sent by "R. T." cannot be given to the bees as it is, being too thin. However, as it is good otherwise, and if your correspondent succeeds in making fresh supplies the proper consistency, he may use the spoilt lot by mixing it up little by little with the latter. It need cause no wonder that complete success is not reached on the first attempt, as so many trifling things may cause a failure; but once success is arrived at, it is easy afterwards. I have made as much as two hundred pounds in a single day according to the recipe published in your issue of September 14, and enclose a sample of some I have made to-day. I boiled it just twenty-four minutes from the moment it began to boil; not from the time it was put on fire. It is well to test the boiling sugar both before pouring in the honey, to see if it is nearly finished, and a minute or two after the honey has been added, to ascertain when it is finished; for it must be borne in mind that all honeys do not contain the same quantity of moisture. It is easy, however, to see that "R. T." must have used good ripe honey, as it was granulated. Some time ago, one of your readers inquired for honey recipes for coughs. Without saying that it is actually the best, I should think that my recipe for candy mentioned above (page 363), would answer the purpose very well, there being so much honey used in it. Such a fondant might also be used as dessert, if put in suitable form. Here, young and old are fond of it. But, of course, in such cases it should not be "medicated," as for bees' use. In conclusion, I may say that three quarts of water to 15lbs. of sugar is not a "printer's error," it being really the quantity I use. I may also add that the particular kind of sugar used makes no difference so far as regards the efficacy of the recipe.—BR. COLUMBAN, St. Mary's Abbey, Buckfast, S. Devon, November 16.

MAKING SOFT CANDY.

[6107.] If your correspondent, "R. T., Co. Antrim" (whose letter appeared on page 457 last week), will communicate with me, I shall be pleased to send him a free sample of soft candy made from Br. Columban's formula. I have made a large quantity of candy from this formula, and find it excellent, the only deviation being that, instead of "boiling twenty minutes," I find (using a brass pan) it takes forty minutes. The quantity of water given is quite right (3 quarts); this is to a great extent evaporated in boiling, and is a great improvement on the "Guide Book" formula, inasmuch as it brings the sugar into perfect solution before boiling commences. Will Br. Columban please accept my thanks for his excellent formula?—A. S. DELL, Chemist, Leigh, Lancs.

(*Correspondence continued on page* 466.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Reynolds, seen in his little apiary on opposite page, affords another instance of "looking before you leap," and wisely left the skep alone when starting bee-keeping. For the rest, his notes speak for themselves. He says:—

"I began to take an interest in bees in 1898, when, in travelling about the country, I had occasion to meet bee-keepers who told me how interesting and profitable it was to own a few hives. My desire to become a bee-keeper began to take shape when a neighbour, who kept bees in skeps, offered to give me a swarm if I would get a hive to put them in. There being an 'if' in the above promise, I began to think what sort of hive should be got. Not liking the skep plan, and having seen a frame-hive, I decided to adopt the modern method, and so made a hive to hold 12 frames. This done, I told my

friend that the hive was ready, only to learn that the 'if' meant if the bees swarmed. This they persistently refused to do, and so my hive was tenantless until the autumn, when I got a driven lot of bees from another friend who was 'taking up' some of his skeps in order to make a start before the year ended. About a week later my first-mentioned neighbour gave me the bees from a skep he was 'taking' to add to the others, so the two lots united made up a strong colony. I gave them about 30lb. of sugar syrup made as directed in Mr. Cowan's 'Guide Book,' and they came out strong in the following spring. I got a swarm from them on June 30, and also took 20lb. of surplus honey in sections at close of season. This ended my first year's active bee-work. You will see by photo that my little apiary consisted of six hives when taken. The second hive on my right is an observatory hive with glass sides, but I find bees will not winter in it safely. Sometimes they live till spring, when the bees desert it and join some other of my stocks. I have therefore removed the glass sides and substituted wood. I make all my own hives, and am very pleased to say I have never had foul brood among my bees. Having been advised to get a copy of the 'Guide Book,' I was soon able to manage my own bees and also able to give a little information on modern bee-management to my neighbours and friends. Sometimes a stock has died out without my being able to say why, but as I have always taken the BRITISH BEE JOURNAL, I can generally gain from the experiences of others, as recorded in its pages, what has been the cause of these mishaps, so I have not needed to trouble you for advice. The hives seen are double-walled, and made, of course, to take the standard frame. I do not find that bees take readily to sections with queen excluder on, so I don't see it at all when working, either for comb or extracted honey. My 'takes' of honey are not so large as some report, but I have had 70lb. of beautiful honey from one hive. All surplus is put up nicely for market, and I am able to sell it at 1s. per 1-lb. jar or section. In wintering I always try to leave the bees about 40lb. of honey to keep them safe until next year's crop comes in. The hives are located close to cottages and within 15 yards of a main road, yet no person has been stung to our knowledge. For myself, when I do get a chance sting, my cure is to remove the sting, then get an onion, cut it through, and rub the affected part without delay. This cures me. In conclusion, our main honey crop comes from white clover, field beans, and the usual flowers in late autumn. Wishing a good season next year, both for the BRITISH BEE JOURNAL and to all bee-keepers who read it."

MR. T. REYNOLDS'S APIARY, NEWTON REGIS, TAMWORTH, WARWICKSHIRE.

CORRESPONDENCE.

(*Continued from page* 464.)

TALL VERSUS SQUARE SECTIONS.

RACKS FOR SECTIONS AND SHALLOW-FRAMES.

[6108.] In reply to Mr. Wright (6100, page 456, B.B.J., November 16), perhaps a few words will make the matter quite clear. The $4\frac{1}{4}$ in. hanging section-frame, to which I referred as well-known, is the "W. B. C." type, and at least one maker has for some years past made a combined rack of these with wide extracting-frames of the same depth. This kind of rack has, I may say, quite recently been hailed in America as a new or untried bonanza scheme for the production of comb and extracted honey in the same super.

My own supers of this description take the $4\frac{1}{4}$ in. plain section with hanging dividers of both the plain and "fence" varieties. It should be noted that Gray's frames are arranged so that they can be altered to the $12\frac{3}{4}$ in. size if desired. I have so altered a number of them, increasing to the necessary width by glueing strips to the edges and planing to size.

I am aware that Mr. Wright dealt solely with the 5 in. by 4 in. sections in frames, and the $4\frac{1}{4}$ in. square sections in racks, and it was *because* of this that I ventured to criticise his article. As I endeavoured to make clear on page 443, the two are not to be fairly compared unless tried under the same conditions. Thus, whilst the title of his criticism is "Tall versus Square," the body of his article is devoted to the question of "Frames versus Crates," which is not at all the same thing. If he does not mind reading his own article, and my comment, in this light, I am sure the matter will be clear.

To prevent any possible misunderstanding, I mean that it is no more fair to compare size, and under this heading to criticise the relative merits of holders or such incidentals as the bee-way attached to divider or section, than it would be to propound the respective advantages of large versus small brood-frames, and to cloud the issue by confining the discussion to a comparison of, say, our type of "standard" frame and the distantly-related "Gravenhorst"; for to be logically clear, the forms compared for size should be alike in type for the criticisms to be analogous.

As I pointed out, the whole of your correspondent's criticisms, with the exceptions of his first and last, Nos. 1 and 10, suffer from this defect; that is to say, his claims for the 5 in. by 4 in. apply equally to the $4\frac{1}{4}$ in. plain.

It is not that I consider his points to be unimportant, and I did not wish to create this impression, but was solely desirous that the points of possible advantage should not be attributed to the 5 in. by 4 in. *unduly*, when, as a matter of fact, they are incidental to the particular way in which the tall sections are supered, and which method is not their own peculiar right.

By the way, the printer dealt a little hardly with my "copy" in one or two small places which slightly obscure the sense, notably where I am made to say that the $4\frac{1}{4}$ in. section necessitates a change of shipping case. This should read, of course, does *not* necessitate. My letter was, however, written in a great hurry, so that the lapsus may be my own, and the date shows that there would not be much time for the hard-worked "proof reader."

I am sorry that my comment marked (2) is not clear, but this is a printer's error and should be marked (3), to which number it refers. The reason that bees more readily take to the shallow-extracting frames is usually the presence of drawn combs, and your correspondent clearly supposes (3) the sections to be filled with drawn comb, as he says it is easier to coax bees into them on account of the comb surface being nearly flush with the edge of section.

The reason that shape of section should matter (to quote No. 6100) is that many users of this section attribute its supposed advantages solely to its shape—that is, its relative height to width, and its thinness. These are undoubtedly factors which may affect the early start, quick finish, and complete sealing, and I, for one, should be very glad to see the matter dealt with, in the light of their fuller experience, by those who have actually tried the different styles under, as nearly as possible, the same conditions.

We have heard from time to time of the theoretical advantages of the 5 in. by 4 in. section, and now what we want to know is, whether these advantages are definitely realised in practice. In other words, are they real advantages or not?—L. S. CRAWSHAW, Ilkley-in-Wharfedale.

QUEEN HUMBLE BEES WANTED FOR EXPORT TO NEW ZEALAND.

[6109.] Mr. A. H. Hamm, 22, Southfield Road, Oxford, and myself have been asked to send humble-bees to New Zealand for the fertilisation of the red clover there. In view of this, we should be very much obliged to any readers of the BRITISH BEE JOURNAL who might be disposed to help us, if they could obtain some of the hibernating queens and forward them to either of us before December 12. (See advertisement in "prepaid col.," page v.)

The queens of several common species that nest underground are now to be found

hibernating solitarily in the ground, at depths varying from 4 or 5 inches to about 2 feet. Those of the surface-nesting species are believed to hibernate in moss and in thick grass. Any species will be acceptable except *Bombus terrestris*. This is one of the underground nesting species; it is a large black species, with two yellow bands and a white or tawny "tail," and it may be distinguished roughly from any other black and yellow species by the fact that the posterior (abdomen end) of the thorax, and the base (thorax end) of the abdomen, are entirely black, the two yellow bands being across the front of the thorax and the middle of the abdomen. We particularly want *B. lapidarius*, a large black species with a red "tail" (common in many places, and hibernates underground), and any of the surface-nesting species.

All humble-bees that hibernate are queens; the workers and drones do not live through the winter. Humble-bees are easily distinguishable from all other kinds of bees, except the closely allied genus *Psithyrus*, by their general appearance. The characters by which the British *Psithyri* may be most easily distinguished from the British *Bombi* by those who are not entomologists are (1) the slightly smoky (not clear) wings; and (2) fewer hairs on the abdomen. I have found that the best place to search for the hibernating queens is on the outskirts of woods or in banks covered with short grass when the ground has been uncultivated for years.

When found the queens should be disturbed as little as possible, and forwarded by post to me or to Mr. Hamm in a box containing damp moss. They should be kept in a cold place before despatch, and on no account warmed at a fire. We are anxious to obtain as many queens as possible.—F. W. L. Sladen, Ripple Court Apiary, near Dover, November 16.

PRICE OF HONEY.

BUYING AND SELLING.

[6110.] I notice several points of similarity in the letters of "E. Whitfield" in your issue of October 26 (page 427), and "Desunt Cetera" in last week's issue (page 454), insomuch as the writers of both communications sell the honey produced by their own bees at not less than 10d. per lb., and also that both appear somewhat troubled because they do not find it easy to purchase as much more honey as they like at 5d. per lb. in order to put same into penny 1lb. jars and sell at the same price, i.e., 10d. per lb., or about 90 per cent. profit, less trouble and cost of putting into glass jars! Of course, this is not so surprising to those of us who know the middleman and his expectations of retirement, country house, etc., etc., but what about the producer? Surely he expects something for being a producer? Now, I have had a very good season this year, and my bees have gathered for me something over half a ton of honey, and this (nearly all of it now disposed of), has been sold from 6d. to 8d. per lb., and none under 6d. On the other hand, I do not find my hives yield me 50 lbs. per colony on the average; I should say, taking the average—year in, year out—30 lbs. is much nearer, and bearing in mind also that bad seasons, foul brood, appliances needed, etc., etc., must be taken into consideration, it appears to me that if one cannot get at least 6d. per lb. for honey in bulk, bees are not worth keeping in England. "Desunt Cetera" quotes, "no minor industry pays so well as bee-keeping." Well, as to that, I should certainly say that to buy really good honey (if anyone is foolish enough to sell it), at 5d. per lb., and put it into pound glass jars (even the best jars), and selling the same at 10d. per lb. (as your correspondents "E. Whitfield" and "Desunt Cetera" wish), as far as profits go, beats all departments of bee-keeping "into a cocked hat"! but—"experientia docet"; last year (1904), I had 5d. bid me for some splendid extracted, my reply was, "No, thanks." I sold same few weeks afterwards 8d. per lb., bulk!—Anti-Honey Grabber, Royston, Herts.

HONEY SELLING

FROM ANOTHER STANDPOINT.

[6111.] Not being what is commonly called a "free trader," may I be allowed to express my view on the ideas set forth by "Desunt Cetera," on page 454 last week? I very much doubt if 2s. 6d. a hive per annum will cover the cost of feeding bees, new frames, foundations, etc., and in the case of comb honey, sections; but even supposing it will, surely the profit per cent. cannot be reckoned without taking into account the initial outlay, and if the cost of a good stock of bees with hive is 30s., and a bee-keeper is fortunate enough to get 50lbs. of honey per hive, taking one with another, and bad seasons with good, and to sell this at 6d. per pound, not 5d., making 25s., then I take it the profit on his 30s. invested, will be nearer 80 per cent. than 800. It must be remembered that the bee-keeper only gets any return at all for his labours once a year, and this is not like the shopkeeper, who is continually turning his money over.

I also notice that our friend says that bee-keeping must not be "measured by sordid gain," and yet he is not willing to increase his output at 10d. per lb., which he can do, "because more than 5d. per lb. in bulk is required by producers," who, I

imagine, can sell at a better price and so fight shy of "free trade"!

I think that although the number of people making a living from bees in this country is small, the number that find it a considerable help to keep bees for sordid gain is great, and are often men in receipt of but small weekly wages. I enclose card, and sign—PLEASURE AND PROFIT, Bucks, November 18.

THE PRICE OF HONEY.

[6112.] If your correspondent, "Desunt Cetera" (6099, page 454), can manage an apiary with an average annual expense of 2s. 6d. per hive, he accomplishes a feat that few up-to-date bee-keepers can perform. Paint, foundation, feeding, new queens, new frames, depreciation, interest, etc., costs me nearer to 10s. per hive per annum than 2s. 6d., and what of carriage, packages, etc.? If beekeeping brought in anything like 800 per cent., I should see no force in our Editors' last week's article entitled "Bee-keeping as an Occupation," in which they very properly speak of the real difficulty of making an independent living by bee-keeping.

I say emphatically that at less than 6d. per pound for extracted honey bee-keeping is a pursuit scarcely worth following unless as a pure "hobby," and then only a few hives would be kept by anyone. If British bee-keeping is to flourish it must offer a reasonable hope of profit, for no man will work hard in his spare time unless it pays him. Our industry, fortunately, is little affected by foreign competition, and the only unfair competitor is the man who sells at less than the real market value, either through ignorance or lack of business ability. The consumer gets the honey no cheaper, and no one benefits but the retailer.

I know for a fact that extracted honey which was bought at 45s. was sold for 112s. per cwt. when bottled. Nobody thinks of selling necessaries to bee-keepers under the market value; what folly, then, to advocate undue generosity on the part of the hard-working bee-keeper! We live under a competitive system which I do not admire, but there it is, and we must act accordingly, till it is superseded by a better.—BUSINESS, Cornwall, November 18.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Bee Journals.—According to Mr. Craig, of the *Canadian Journal*, we learn that "there are over 80 papers devoted exclusively to bee-keeping. France leads the way with 19, Germany 11, Russia 9, Belgium 9, United States 7, Austria 6, Italy 3, England, Spain, Algiers and Australia 2 each, Denmark, Switzerland, Sweden, Norway, Holland, Roumania, the Netherlands, Ireland, and Canada 1 each. Probably this comes pretty near the truth, but there are minor errors; for instance, Ireland has two bee papers, and Holland and the Netherlands are not simply six or half a dozen, but the very same individual. Over there apparently bee journalism lacks a full measure of support, as it does with ourselves. Any apiarist who does not subscribe to at least one bee journal fails to realise half the pleasures of bee-keeping; I am quite confident he loses the small cost ten times over. Why, two or three pounds of honey pays the price, and the knowledge gleaned enables him to add ten times that to his total.

Wanted—A Contents Table.—Why is it that almost all bee papers, with the exception of our own and *Gleanings*, have no index to show the matter treated of inside the cover? It is a great want. Nothing I know sets off a bee journal better than a taking bill of "contents." For the busy man such a list is a veritable boom. A glance at the table shows him at once the subject of most interest, or the name of the writer he most desires to study. Secondary matter can wait moments of leisure, but this particular item demands immediate attention. The "contents" supply him with exactly what he most needs. Couldn't some of the editors take a hint and supply this felt want?

Wax Scales.—"Wax is produced in scales and only *six* of them on a bee," says Mr. Hasty (*A. B. J.*, page 731). Just in the previous sentence the genial afterthinker admits his "memory is poor." Just so, at least, on this particular point. Should it not be *eight?* (vide "The Honey Bee," pages 48 and 170).

Another Dickel "Theory."—F. Dickel says: "Since it is generally admitted that queens reared by the new and so-called improved methods are inferior to normally reared queens, it is advisable that bee-keepers make better use of the cells so easily obtained from their colonies having cast swarms." I wonder how many bee-keepers of the front rank would subscribe to this doctrine? Queen rearers, of course, will set it down as rank heresy, but Mr. A. C. Miller gives it his approval.

Caucasian Bees.—One editor characterises these as "the most worthless race of bees that has ever been offered to the public." I think that is practically the finding arrived at in this country by our Mr. W. H. Brice eight years ago, after giving them a pretty exhaustive trial. His verdict was: "I consider them worthless for bee-keeping purposes in this country, and, in a word, I call them 'wasters.'"

Thus," he says, "excit 'Reines abeilles de la race Caucasienne gris et jaune de qualité éprouvée.'" They were quiet, too quiet, poor breeders, lazy as workers, and bad winterers. Americans are seemingly finding out something similar now.

Taking Notes.—Mr. Hutchinson was over in Canada lately awarding premiums at the Toronto Show. He soon saw that the Canadians could put up attractive exhibits, and he frequently found them so nearly equal in merit that decisions were difficult. The go-ahead system of selling honey took his attention particularly. It was put up in an infinite number of ways, every one of them attractive, and all leading to ready sales, so that most exhibitors sold out quickly. The honey pails, holding three, five, and ten pounds, he declares the most handsome tin packages that he ever saw. Selling "honey on a stick" seems to have caught on, and as a new means of sampling, appears a good idea. Even dainty ladies took a "lick," while their moustached escort made away with samples of the dainty bits of sweetness. He adds, "United States bee-keepers can learn a most valuable lesson from their Canadian brethren in regard to reaping a harvest of sales at fairs. These spread broadcast the knowledge of the sweetness and deliciousness of honey, because everyone who gets a taste remembers it, and wants more." Mr. Root, too, is enthusiastic over this point, and has found it immensely successful. We also might learn this valuable lesson.

Out-door Feeding.—This has lately been considerably boomed in *Gleanings*, and a claim has been made that an almost perfect feeder is to be found in a large honey tin hung top down at a height of about four to six feet from the ground. Bees feed from the holes punched in the lid, and loading up gently, there is no fighting and no loss of bee life. Mr. Green points out a danger often experienced by those who have tried it in this country, which has proved so serious that the practice has almost fallen into disuse. "In a cold drizzling rain the bees hovered around the feeders until they became wet and chilled. Bees were scattered all over the ground and festooned over everything near the feeder that would support them, until many thousands of them perished. The losses from that source probably came near balancing the good done by the stimulative feeding." I once drew attention to what I called "inside open-air feeding," where the feeder was suspended from the roof of an open shed and the bees plied their task peaceably and without let or hindrance even on days by no means genial. There seemed to be no loss of bee life either by chill or fighting.

CURING "BLACK BROOD."

MR. E. W. ALEXANDER'S METHOD.

This has been one of the hardest problems for me to solve that I have ever met in bee-keeping. For three years we tried everything in the line of disinfectants that we could hear of, also putting our bees on foundation, which did but little good. Some of the things we tried seemed to help at first to check its deadly work; but in a short time it would show itself again as bad as before; and so the years went by while we lost nearly our entire honey-crop and over a thousand colonies before we got the first sign of a cure, and even then it was so simple it seemed like a drowning man catching at straws. But I kept at the little proof I had until I developed it into a perfect cure. Then for three years we tested it thoroughly on hundreds of colonies, so that we could be sure it was a cure which could be depended on, and now I send it to *Gleanings* for the A. I. Root Co. to give to the world.

This cure is on the line of introducing new blood into the apiary, which will necessitate getting a choice Italian breeding-queen, one of the best honey-gathering strains that can be procured. For this special purpose I prefer quite yellow Italians. Now for the cure.

Go to every diseased colony you have, and build it up either by giving frames of maturing brood or uniting two or more until you have them fairly strong. After this, go over every one and remove the queen; then in nine days go over them again, and be sure to destroy every maturing queen-cell, or virgin if any have hatched. Then go to your breeding-queen and take enough of her newly-hatched larvæ to rear enough queen-cells from to supply each one of your diseased queenless colonies with a ripe queen-cell or virgin just hatched. These are to be introduced to your diseased colonies on the twentieth day after you have removed their old queen, and not one hour sooner, for upon this very point your whole success depends; for your young queen must not commence to lay until three or four days after the last of the old brood is hatched, or twenty-seven days from the time you remove the old queen. If you are very careful about this matter of time between the last of the old brood-hatching and the young queen commencing to lay, you will find the bees will clean out their breeding-combs for this young queen, so that she will fill them with as fine healthy brood as a hive ever contained. This I have seen in several hundred hives, and have never seen a cell of the disease in a hive after being treated as above described.

It is not necessary to remove any of the combs or honey from the diseased colony,

neither is it necessary to disinfect anything about the hive. Simply remove the old queen, and be sure the young queen does not commence to lay until three or four days after the old brood is all hatched. This treatment with young Italian queens is a perfect cure for black brood.

In regard to those old queens that were formerly in your old hives, I think it best to kill them when you first take them from their colonies—not that the queen is responsible for the disease, for I am sure she is not—but a young Italian queen that has been reared from a choice honey-gathering strain is worth so more to you that I cannot advise saving these old queens.

I have experimented along this line considerably, and found, after the colony has been without a queen twenty-seven days, as above directed, it will usually be safe to give them one of these old queens, and the cure will be the same. Still, there have been exceptions, so I advise killing them at once.

Now, my friends, do not let another season pass without cleaning your apiary of black brood, and also at the same time re-queen it with young Italian queens, so you will not only harvest a fair crop of honey next summer, but will have an apiary that you will be proud of, and take pleasure in showing to your friends. I know many of you have become discouraged in trying to rid your apiaries of this fatal disease, but that does not help matters any. The only proper thing to do when these troubles do come is to face them with a determination to overcome any and every obstacle that comes in your way, then when success rewards you for your perseverance, how pleasant it is to look back over the past and realise that you have accomplished all you laboured for! I hope that you who have this disease in your apiaries will give this treatment a thorough trial next season, and please report the result of your trial to *Gleanings*, so that every reader of it will have your opinion of the method.

In my next article I will call your attention to some of the possibilities of bee-keeping; and, in doing so, I think I can show, at least, some of you, how you can realise more net profit from an apiary of one hundred colonies than many obtain from apiaries of several hundred. For some time I have expected some one would take hold of this subject and write a series of articles telling us how we might add much to our present income. If in my attempt to accomplish this I fail, I shall have the consolation of knowing it was in a good cause; and if I succeed, it will afford me much comfort to think I have added my mite toward helping my brother-man.—*Gleanings* (America).

Notices to Correspondents & Inquirers.

*** ERRATUM.—In second paragraph of "Homes" (page 454, last week), the date of Mr. Latchford's beginning bee-keeping should be 1894, not "1904," as printed.

*** If any of our advertisers can supply a bee smoker in accordance with the following note, we will be glad if they will notify same on postcard, which latter will be forwarded to the writer. Our correspondent says:—"Kindly inform me where I can get a genuine-made American smoker? I want a 'Crane,' if possible; but hitherto the dealers to whom I applied have only sent me an English-made copy; and I want one made in America by an American maker. I am a regular subscriber to the B.B.J., but have not seen them —advertised in it.—Yours truly, C. S. SHEPHERD (Colonel)."

W. E. C. (Bromley Common).—Stores for Winter.—In packing No. 1 hive for winter we should contract the hive to as many frames of comb as the bees cover, using the "two outside frames now filled with sealed honey," as you would use "dummies" for contracting. The rest of the remaining eight frames may either be removed or left outside those left for the bees' use. No candy will be needed for this stock. No. 2 hive might have a 2lb. cake of candy given over feed-hole with advantage after packing down.

H. HARTLEY (Co. Cavan).—Suspected Loss of Queen.—1. We are glad to say neither of the two bees sent are queens. So both hives will be safe so far as risk of queenlessness. They are worker bees that appear to have suffered from abdominal distension. 2. Sugar sent is suitable for bee-food if guaranteed pure cane.

L. T. (Presteign, Radnor).—Caucasian Bees.—We are much obliged for extract from the Canadian paper mentioned, but reference to B.B.J. of June 22 will afford a far better idea of the intention of the U.S.A. Department of Agriculture with regard to Caucasian bees than that given by our Canadian contemporary. In fact, Mr. Frank Benton, Chief of the Apicultural Section of the Department, favoured us with a pleasant call in passing through London on his way to the Caucasus, along with other parts of the world, on a mission of investigation connected with bees and honey-producing plants, such as may prove beneficial to the bee industry in the United States, fuller particulars of which appeared in our issue of the above-named date.

Editorial, Notices, &c.

RETURN OF MR. AND MRS. COWAN.

All being well, we expect that our Senior Editor and Mrs. Cowan will (after a sojourn of nearly eight months at Pacific Grove, California) have to-day landed in England. They left Boston on the 21st inst. by the Cunard liner "Ivernia," and are due in Liverpool on the evening of the 29th.

BEE-KEEPING AS AN OCCUPATION.

Reverting to the short leader on the above subject, on front page of our issue for November 16, the line we thought it right to take in dealing with the question has brought us an interesting communication from another reader, who puts his view of the case as follows :—

"Sirs,—I notice a couple of articles in the B.B.J. of November 16 which make depressing reading for some of us. The first is your "editorial" on "Bee-keeping as an Occupation," and the other a letter, on page 454, from a correspondent who signs himself 'Desunt Cetera.'

"There is a good deal written for and against bee-keeping as a means of earning a living, some articles being so optimistic as to deceive no one, whilst others seem designed as a set off, and are discouraging, as for instance, your leading article, and also the letter mentioned above.

"In the former optimistic class, I place an article which appeared in a popular magazine with a very large circulation. It formed one of a group written with a view of inducing young men to remain on the land. The prospects therein set forth are bright and feasible, if rather 'ideal,' and although written with a specific aim, one could hardly accuse the author of cruel and wilful deception.

"No doubt the effect of that article will be to induce some to turn their attention to bees with the object of testing the truth of the statements contained therein.

"To instance my own case. I am a schoolmaster by training, and though still a young man, my health and temperament will not endure the confinement. I have a great desire for a healthy country life, but, whilst not averse to hard work, I have had no training for it. Bee life has always had its fascination for me, and I have proved myself to have some aptitude for the work. To such as myself, the life is an ideal one; but before taking it up on a large scale, it is necessary to know what the prospects really are. One does not wish to lose time and money experimenting if the information is otherwise obtainable. As I have said, reports vary from one extreme to the other concerning the profitableness of the business, so that for my own part, I cannot unreservedly accept either view.

"It cannot be doubted that honey-production alone is not to be depended upon, and as that is a branch of bee work so popular as a hobby, it is somewhat spoiled as a profession. But that is surely not the limitation of bee work? Anything promising a speedy fortune is an attraction to the many, but there are still some content with a living considerably short of the £100 in the second year that your correspondent in India inquires about. It is just these who would be glad to know in so many words whether a young man, willing to use his whole energy, with intelligence on modern lines, and in several possible branches, and who is adapted to the work, can reasonably hope for a living from bees. I send name, etc., for reference. —Tyke, Northants."

In reply to the above we may say at once that we had no intention of writing anything that could be justly described as a "set off"—as we understand the term—or as intentionally "discouraging." This should be obvious to all readers who have had experience of our teaching in this journal.

But, as stated in the article in question, we attach "more value to fair-minded candour" than in giving either countenance or encouragement to exaggerated statements regarding the profits of bee-keeping, which cannot be borne out by facts. When we are favoured with the name of the fortunate bee-keeper who has, say, for as few as two years in succession, realised £300 a year from bees alone in this country, we shall be very pleased to publish the fact and be proud of it. Meantime, we adhere to every word in the statement made on page 451.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

COMMENTS.

[6113.] *Uniting.*—Perhaps the most difficult union is that of a driven lot to a stock which has been for some time queenless (*vide* 6069). Flouring with the bees left *in*

situ on combs might naturally be looked on as rather an experiment. Set both lots on an equality, and their union becomes easy. Neither has then any cause of quarrel. Therefore both should be made *combless*. Shake bees off combs and let them run into a skep; throw driven lot amongst them, and then give the combined lots a good shake up two or three times in order that they may be thoroughly mixed. I would not expect any refusal to unite even without flouring, but undoubtedly a dusting would tend to make assurance doubly sure. It must be remembered in the case under consideration bees on combs had full honey-sacs, while those of the driven lot were empty. This of itself was a *casus belli*.

Government Blessing Apiculture.—Just the other day I expressed a wish that our Government would do anything to aid apiculture. This they have done by issuing a leaflet from the Board of Agriculture giving "Advice to Beginners in Bee-keeping." It states that the keeping of bees is much more frequent now than thirty years ago, chiefly brought about by the perfecting of the modern frame-hive. Beginners should get a good text-book even before purchasing the bees. They should join a county bee-keepers' association, and, if possible, interview an experienced bee-keeper, and act under his guidance. The virtues of the queen are enlarged on, as on her egg-laying powers depends the welfare of the colony, and under her benign influence it is that the large and vigorous population can be guaranteed. Weak stocks are always unprofitable; the strong one, strong at the right time, is the profitable one. Wise words are also spoken about the best protection against being stung- gentleness in manipulation. The Department evidently employed or consulted a man of large practical experience in drawing up the leaflet, and it consequently has been done well.

Knowing and Judging Heather Honey.—At the conversazione it was deemed "strange" that Scottish grocers should not know genuine heather honey. "'Tis true, 'tis pity. Pity 'tis, 'tis true." They didn't, and many Southern judges don't! To prove the first, I know of a first-class firm, desiring to do their very best to secure the purest heather honey, preferring sections containing almost black honey, possibly a large admixture of honey-dew, to some of the very finest product of *Calluna vulgaris*. The one was dull, dead, and dirty; the other bright, brilliant, sparkling amber. The flavour of the first was rank and unpalatable, that of the other crisp, toothsome, and capable of delighting the finest and most delicate palate. The odour of the first was unpronounced, while that of the other sweetened the air yards away. In consistency they differed as the poles. To prove the second clause of my indictment, I have but to point out the fact that Scotchmen have ceased exhibiting specimens of their genuine heather honey at Southern shows. The reason is not far to seek, and many will be ready enough to state it if there is a call for the same.

The "Standard" Section.—I feel pleased that common sense was such a prominent commodity at the last conversazione when this question came up. No doubt, as on many other points, each bee-keeper will be a law unto himself as to what size sections he shall use, but the discussion will do much to secure the official recognisance of the $4\frac{1}{4}$ by $4\frac{1}{4}$ by 2 in. section as the best receptacle for comb honey. The discussion and pronouncement will do more. It will check a tendency which has been sneaking in to favour sections quite incapable of producing honey weighing 16 oz. to the pound. These light-weight sections are doing an incalculable injury to the industry. I have again and again urged the saner policy of using only sections of such a size as will produce honey weighing as near as possible a full pound. I contend that every half-dozen parcel should turn the scale at 6 lb. This the sections generally in use in Scotland for years do secure. The shape is a minor consideration: but as to that there is no use beating a dead horse.

Location.—The site of an apiary and its environment have a very marked effect on the total honey production, especially in such a season as we have just passed through. Only about twenty miles from me there is an excellent bee district containing some very successful bee-keepers. This year, owing to the prolonged drought burning up their crop of white clover, they had a regular failure in surplus honey. Here, with a heavy, retentive soil, July was a superb month, and right through, almost, honey rolled in at a great rate. Near the sea the area is circumscribed by the water occupying one possible line of flight, and thus making it unproductive. Generally, too, near the coast the soil is of a light, sandy nature, and does not so well withstand the evil effects of prolonged drought, so the secretion of nectar got a sudden check before the end of July, making the season short. At a lower level of something like 600 feet (and perhaps with a dry and somewhat arid stretch of moorland) one successful apiarist records that he had not a vestige of heather honey in his sections. Here, strong stocks gave ten sections at least, in some cases a rack of pure heather honey, with about the same number of a blend of the two.—D. M. M., Banff.

INSECTS DISFIGURING SECTIONS.

[6114.] I remember seeing some remarks in the B.B.J. some time ago with regard to the disfigurement of finished sections by an insect which burrows under the capping. I have this year noticed that while this trouble is not more frequent, the ravages of the insect in question are more pronounced—in some instances a web being spun on surface of comb and masses of white matter in minute ball-form being deposited. In the course of handling nearly sixty dozen sections, I have met with it in this acute form but twice—once at beginning of the season, and just recently—which is but a small proportion I know, but the severity of the cases leads one to fear another source of anxiety to the bee-keeper, and I think is sufficient ground for asking through the columns of B.B.J. if others have noticed the same, and whether the matter has received any further attention at the hands of some of our skilled investigators with the microscope. Yesterday, I was able to capture the grub causing the mischief—a specimen about three-sixteenths of an inch long. If this should increase, we shall have a disfigurement in sections which will render them absolutely unsaleable as comb honey.

We have enough "enemies" to contend with already, and if the fears hereby given expression to are groundless, none will be better pleased than — H. D. Davidson, Basingstoke, November 21.

[If you can send a specimen of the "grub," which is supposed to be causing the mischief, we will forward it to Mr. F. W. L. Sladen, who is taking considerable interest in the endeavour to find an explanantion of the trouble you and others complain of. We fear you are mistaken in it being so large a grub as is named above, and Mr. Sladen's investigations so far do not confirm your view. Personally, we now have a section at this office in which the mischief is developing and there are no signs, so far, after many weeks of observation, of anything but tiny little burrowers as small as cheese-mites. Eds.]

SECTION-NUCLEI.

[6115.] I have for some time been looking out for reports from those who have tried the "Swarthmore" system of nuclei-forming but such as appeared have been surprisingly few and disappointingly brief. In refreshing contrast, however, are the contributions from the writer of 6098 (page 452) who has thoroughly satisfied himself as to the possibilities of the small-comb system.

I had intended giving the new method a fair trial, but had no time to rear early queens, and as for the late-hatched ones they were almost a complete failure this season. Of six queens set out during the third week of July, one got mated, the rest simply disappeared. One out of six must be regarded as a very mild form of success. But cases of queens failing to mate have been far too common this season. Indeed, I do not recollect ever having seen so many queenless stocks and drone-breeders as last autumn. Whether in skeps, ordinary nuclei, or heading swarmed stocks, July-reared queens have, as a rule, done badly.

Unfortunately for their occupants, the baby nuclei were made up at a most unpropitious time — just as the honey-flow ceased, so they were fair prey for the robber bees.

The lot containing the ultimately successful queen was completely cleaned out, and the defenders sadly reduced in numbers. Luckily the queen was all right, and, after replacing the empty combs with partly-stored sections and adding more bees, all went well. Eggs were being laid freely by the closing days of July. Shortly after, I made up a three-frame nucleus for her majesty, and, with steady feeding and insertion of an occasional frame with foundation, she built up an excellent stock by mid-September. I doubled for wintering, and with twenty standard-frames well stored the queen should have ample scope and encouragement for early and rapid spring increase.

I hope to try the small-comb system again next season, and must make up some mating-boxes before the busy time comes on. I should like to hear from any who have been successful with section-nuclei, and particularly as to how the resultant queens compared as to honey-getting with those handled on orthodox lines.—J. M. Ellis, Ussie Valley, November 25.

SIZE OF SECTIONS.

[6116.] Referring to the discussion reported in your pages on the above question, I would like to ask why, when it is proved that the $4\frac{1}{4}$ by $4\frac{1}{4}$ by 2in. section—if so well filled as to be classed as A1 quality—contains as much as 18oz. of honey, a section of that width should be advocated? Just think what 18oz. to the pound means to the bee-keeper in the shape of dead loss.

At present I work with a section measuring 1 15-16ths wide, and find that my best sections weighed $17\frac{1}{2}$ to $17\frac{3}{4}$ oz. each. In order to get at a just weight, I reduced some sections to $1\frac{7}{8}$ in., and find that these, when finished as my own are, average $16\frac{3}{4}$ to 17oz. Therefore I say, in the interest of bee-keepers—to whom every ounce of honey is of value—this $1\frac{7}{8}$ section is the one to be advocated in justice to all. Bee-keepers who do not allow their

sections to be properly filled, should only get value according to the appearance and weight of their produce. I figured out what I have lost by giving one and a half ounces on 2,760 sections, means 250lb. of honey, or 250 sections, which at my price, means £11 in cash.—J. H. RUSSELL BEATTIE, Amersham, November 27.

PROFITS OF BEE-KEEPING.

[6117.] Thinking that it may be of some interest to readers, who, like myself, only keep a few hives of bees, I send an account of my expenditure and income from bee-keeping for the past ten years. I simply give figures, as going into detail would take too much space. The prices credited for honey given away as presents to friends, and that used in my own home, are based on what was realised from sales. My average experience is rather more than 2s. 6d. per hive.—W. D. M., Forfarshire, November 27.

Year.	No. of Stocks	Expenditure. £ s. d.	Income. £ s. d.	Used and Presents. £ s. d.
1896	1	2 7 3½		
1897	2	2 2 9½	1 3 6	Omitted to take note.
1898	2	15 1	1 1 6	
1899	3	1 8 5	1 15 4½	1 18 6
1900	4	0 17 5	1 5 0	2 4 0
1901	2	0 8 6	4 17 4½	2 7 0
1902	3	0 14 2		
1903	3	1 2 8½	1 6 11	2 1 8
1904	3	1 5 5½	4 4 3	2 13 2
1905	2	1 14 10½	4 1 1	2 14 0
Total	...	13 6 8½	19 15 0	13 18 4

TANGING BEES.

AN EXPERIENCE IN CENTRAL AFRICA.

[6118.] I have just read the note (on page 451) by "D. M. M., Banff," on "Tanging Bees." Perhaps it would elicit facts and opinions if I gave my experience. The late Mr. Raitt, of Blairgowrie, showed me something about bee-keeping many years ago, and I took out hives, etc., to British Central Africa, and we kept native African bees there for several years. They usually became very vicious after honey had been taken from them; indeed, for some time afterwards they were like the traditional Irishman, ramping around with the coat-tails trailing, ready to do battle anywhere and everywhere possible, and after removing honey at night, for the whole of next day one side of the house would be quite unget-at-able.

Once, while we were at home, a gang of natives, hoeing round the hives, were put to sudden flight by an eruption of bees, dreadfully enraged because their hive had been struck sharply, and several turkeys, ducks, and hens were killed before quiet was restored.

One afternoon I heard a swarm of wild bees overhead, and calling quickly for brass pots, etc., we soon had a splendid din. The bees came right over the roof and landed in a fine cluster on a little tree immediately beside the verandah. They certainly seemed influenced by the big row we were making, and, in fact, they could not have reached the little tree in a straight line. There was nothing there to attract them, and I am quite convinced they were diverted from their original course by our "tanging."

With many thanks to yourself for your valuable paper, and to our friend, "D. M. M.," who has always something interesting to write about.—JOHN W. MOIR, Edinburgh, November 21.

CANDY MAKING.

[6119.] If you will kindly give me space I should like to say that I have followed Br. Colomban's recipe in detail—not in such a large quantity, I admit, but in the same proportions, and have been very pleased with the results, and judging by the way in which the candy so made is consumed by the bees, it is evidently appreciated by them also. I have made two lots, both successful and satisfactory. In fact, it is the first time I have ever been able to make it properly, without the candy becoming hardened. I also wish to add my thanks to Br. Colomban for his formula. —APIS, Birmingham, November 25.

WOOD-WOOL.

[6120.] A correspondent made an inquiry in your pages a few weeks ago asking what "wood-wool" was, and you could not give the information. May I therefore be allowed to say that it is wood worked, or cut, into long, fine shreds about the thickness of paper? These shreds, which are crumpled up and sent out in large bales, are used extensively by manufacturers for packing soft goods or those easily injured from damage. Wood-wool is also much used by fruit-growers as packing to protect tender fruit.—ELECTRO, Sheffield.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The delightfully-situated Cornish apiary, seen on opposite page, makes one envy Mr. Harborne his location, which seems to us an ideal one. The fact of its having been built up since May last year, and furnished entirely with home-made hives, affords ample testimony to the capacity of our friend as a bee-man. For the rest his "notes," sent at our request, speak for themselves. He says:—

"My interest in bees was first aroused

on my summer holidays in August, 1894, when I was invited by a friend to see some sections taken from a hive, and I well recollect how carefully I tucked the bee-veil supplied to me for protection inside the turned-up collar of my coat, and how tightly I jammed my hands into the pockets while watching the operation; but my interest was so much aroused that on returning home I bought a copy of the 'Guide Book,' and commenced to take the B.B.J. I also set to work and made a 'Cowan' hive according to the directions given in the book, and then, in the following spring, I bought a stock of bees and made a start in bee-keeping. At this time I was located in Cornwall, where I remained till 1903, when I sold my bees and appliances, and returned to town life. My health, however, broke down and compelled me to return here in the following November.

"The apiary seen (with myself and the cat) in the picture has been built up since May, 1904, from a swarm I had given me, two stocks bought in the October, and various lots of bees I got for the driving. The hives are all home-made. The spring of 1905 found me with 14 stocks, which have increased to 23, and during the past season they gathered over 800 lbs. of extracted honey, and filled nearly 300 good sections. With regard to marketing my produce, I've never found any difficulty in selling 1lb. sections, and 1lb. screw-cap jars of extracted honey at 9s. per dozen. Neither do I think any bee-keeper need have trouble in finding a market who takes a pride in putting up good honey in an attractive form. A good many people pass my place here on their way to Land's End, and a small show case at the roadside helps me to dispose of a good deal at 1s. per lb. or section. In 1901 and 1902, I took first prizes for sections and extracted honey at Penzance. I may say that my success is entirely due to the help received from the 'Guide Book' and B.B.J. I am also especially indebted to H. W. Brice for his article in the B.B.J. of February 3, 1898, entitled 'How to Achieve Success.' In conclusion, I add a line on the foul brood question, to say that, by keeping hives, etc., scrupulously clean, along with the liberal use of foundation and napthaline, and by medicating all food given, I've kept my bees healthy and free from disease, while others near have allowed their bees literally to rot. In the bees I find profitable employment, and an inexhaustible pleasant hobby. Once at work amongst the hives, every care and trouble is gone, and happiness reigns supreme."

MR. S. HARBORNE'S APIARY, CHYVARTON, ST. BURYAN, CORNWALL.

SOME EXPERIENCES WITH BEES.

In looking over the *American Bee Journal* for October 12, I came across many things that make me feel as if I must "speak out in meeting." In fact, I feel about the same whenever I read any of those papers.

I had a little experience last summer something on the line of Dr. G. Bohrer's (page 711), where there must have been two queens in one hive for twenty days, though I actually saw but one. The experience was this:—

On July 2, two large swarms came out and clustered together. As has been my custom in such cases, I put them all into one hive, putting on three supers to give them plenty of room; but they were not satisfied, and on the third day they deserted the hive in a body and all clustered together again, and I put them into hive No. 2, adding three supers as before. This time they went to work with a will, and on the tenth day I added the fourth super. On the twentieth day after putting them into hive No. 2, fully two-thirds of them came out with a rush, and were placed in hive No. 3, with two supers added.

Examining No. 2, I found they had completely filled and capped the first three supers, and nearly filled the fourth. I removed the full ones, leaving the partly-filled one, which the remaining bees finished up in good shape and still occupy it—a good, strong colony, too.

Those which I put into No. 3 filled their two supers, and, like the others, are now strong in bees and honey.

It looked to me as if there were two queens in hive No. 2 during those twenty days. Anyway, they stored nearly 150 lb. of section-honey, besides putting enough in the brood chamber for winter.

I started in the spring with thirty colonies, and increased to fifty. The honey season was short, but very brisk, and my harvest amounts to just about 71 lb. to the colony, spring count.

I have never followed Dr. Miller's plan of using bottom starters, but all my sections during the main honey-flow were filled clear to the bottom with barely a small bee-space at the corners. A few sections, near the end of the season, were capped before reaching the bottom. Perhaps with bottom-starters these would have been filled also, but I have my doubts.

I am not in favour of filling a lot of supers beforehand in anticipation of a big honey crop, with a liability of having a lot left over unused. My plan is this:—I prepare enough beforehand to go around; one super for each colony; then, when the swarming season approaches I go into the shop and begin work folding sections, putting in starters and filling supers, and I am right there ready to attend to every swarm that issues. So I have something to keep me busy between times, and do not have to sit around doing nothing, waiting for the bees to swarm. Even with this method, the sudden closing of the honey-flow, the past season, found me with about fifty supers on the hives with little or nothing in them.

Capturing swarms after they have clustered has been rather a serious matter with me on account of so many tall trees near my apiary. My swarm-catcher is a light frame, one foot square, and the same in depth, lined with cloth. This I fasten to the end of a pole, and to lower a large swarm safely to the ground on the end of an eighteen-foot pole is rather a tough proposition, requiring the exertions of a strong man. But last summer I hit upon a scheme that makes the matter comparatively easy, unless the swarm is more than twenty feet high. I fastened a pulley at the top of my longest pole, through which a quarter-inch rope is run, and a bracket at the bottom to fasten the rope to when "fishing" for a swarm up a tree. One end of the rope is provided with a snap to fasten the swarm-catcher.

When ready for business I set the pole under the swarm, pull the swarm-catcher to the top, fasten the rope to the bracket at the bottom, shake the swarm into the box, and let it down "just as easy as falling off a log," and with greater satisfaction. This solves the problem very well when the swarm is within reach of the pole; otherwise, a ladder has to be used, which is very much against my "constitution."

Last summer I tried "shooting" a swarm that had clustered nearly forty feet high. I was sceptical about being able to cut the limb off with a shot-gun, but it came off slick and clean the first shot. Still, that did not help me to secure the bees, for, as I predicted, when they found themselves falling, a large part of them broke the cluster and took to wing, while intervening limbs scattered the rest. All then "rose to the occasion," and clustered higher than ever, so I had to resort to the ladder after all.

Several years ago I had a swarm in the air, which seemed determined to go to the woods. My wife came to the door, and said, "Why don't you take the shot-gun and shoot into them?"

"What for?" I asked.

"Well, you might kill the queen."

"True," I replied, "I might stand one chance in a thousand or two of hitting the queen, but I don't believe it will pay to try."

It is so with "shooting" a swarm; one *might* bring a cluster to the ground in a body, but I don't believe it pays (me) to try.

A few words about assessing bees and I am done. On the assessor's roll here every-

thing supposed to be liable to taxation is printed, but bees and poultry are not mentioned, and are not assessed. I tried once to get my bees insured, but the agent refused to do it. So why should I pay taxes on them?—A. F. Foote, in *American Bee Journal*.

Queries and Replies.

[3966.] *A Mistake in Transferring.* — I started bee-keeping in March last by purchasing a stock in a home-made wood hive. In July the bees hung out under the flight-board in large clusters, and upon opening the hive to see what was causing this, I found it was literally chock full of honey; in fact, the bees had got up into the roof and built combs there. I was then advised to transfer the stock to a larger hive. So I purchased a Twentieth-century hive fitted with full sheets of foundation on ten frames. The colony was very strong, and I transferred them in the usual way by throwing the bees down on a sheet in front of their new home, in August. Unfortunately I was advised to take all the combs containing brood and about 30 lb. or 40 lb. of the honey, which I extracted. As already said, the bees were very strong at the time, but shortly after transferring wet weather set in. Upon looking inside the hive, late in September, I found the bees had drawn out some comb on all the frames, but they only occupied the four middle ones (although originally they had covered the whole ten). There were no drones left (all seemed to have been killed off), and some sealed honey was seen in about half-way down the four frames of the comb occupied; but I could see no brood or young bees, and the centre of each comb looked very yellow. About a fortnight ago, I gave them a pound of soft candy and removed all the frames but the four mentioned above, and covered them up. In view of this I ask:— 1. How shall I now proceed? I thought of examining again the first warm day we get, and giving some more candy, and then cover up and leave them till spring, after that feeding them well with syrup. I know that I have done wrongly by transferring them. 2. Do you think the queen is still in the hive? She was a good one, and bees have worked well. I can only presume the queen must have got starved and stopped laying after she was transferred in August, as she was very prolific before that time. I suppose, also, I should have put some driven bees with them in September and fed up; at least, that is what I gather from reading your B.B.J. and "Guide Book," from which I have learned all I now know. Under the circumstances, what would you advise, and how should I pack for winter? — Perplexed, Montgomeryshire, November 22.

P.S.— I have just bought and put in a shed two skeps of bees (both heavy, about 40 lb.), and an empty "W.B.C." frame-hive, for making a better start next year.

Reply.—1. The probability is that — owing to your acting on the foolish advice given with regard to transferring — the "strong colony" has been transformed into a queenless and, consequently, worthless one. But, unless a fertile queen and some more bees could be procured and added to the stock, nothing can be done at this late season. 2. Our impression is that the queen has been lost or killed during the transferring process; but the worst part of the affair, as detailed above, was taking away the frames of comb containing brood. By so doing, what would now be the main strength of the colony was for some perverse and unaccountable reason destroyed. It is, of course, possible that the queen is still there, but the chances are against this, as some signs of her presence should have been seen when comb-building was going on. You can do no more by way of carrying the bees over winter than renewing the candy as required.

[3967.] *Buying Swarms Loss of Weight in Travelling.*— Last season I bought a good many swarms. Some I received from a member of a county association, who had been recommended by the secretary. I offered 10s. 6d. a swarm, or 2s. 6d. a lb., and the seller accepted the latter price for small ones. I wrote also to three persons who were advertising 12s. 6d. swarms in the B.B.J. One replied that all his swarms were already booked; another advised me to have a 15s. one, as in the latter part of June, swarms generally weighed above 7lb. I took his advice, and duly received a capital lot, weighing 7lb. 1oz., which, with the box, came to nearly 1 stone.

The third dealer also forwarded a splendid parcel, for the little boy who brought it seemed to be carrying it with difficulty. It was of about the same weight as the last, and the railway charge the same, but, alas! the weight was chiefly in the *wood* of a heavy, ugly box, and the bees scaled exactly 1lb. 15oz. Receiving no explanation about a swarm which was not worth the journey, I sent 5s. as the price. This the dealer returned, saying he had done his best for me—that, of course, bees decreased in weight on the journey, and that 12s. 6d. was the price of the swarm. Now, I should be greatly obliged if you will kindly inform me in your next issue what you consider- 1. Should be the average weight of a 12s. 6d. swarm of ordinary bees in the middle of June? 2. The fair price

of a 2lb. swarm; and 3. What allowance for decrease in weight can reasonably be made for a swarm which has been, say, two days on the road; is ¼lb. in each lb. sufficient?—YORKS, November 25.

REPLY.—1. Judging by price at which swarms were offered in our pages during summer, we should say not less than 4lb. 2. Personally we should not care to purchase a prime, or top-swarm, weighing only two pounds. In your case, if you had to pay carriage on a heavy box containing less than 2lb. of bees, we think your offer of 5s. a very fair one. 3. Yes; 25 per cent. for loss in weight is a fair deduction for loss on a two days' journey.

[3968.] *Queen-cells and Queen-rearing.*—It will oblige me, as a beginner with bees, and perhaps others of your readers also, if you would give a few authoritative particulars with regard to the curious fact of bees being able to raise a queen from an egg or young bee-grub which, if left to take its ordinary course, would produce only a worker bee. Though I have read something of this phenomenon, I do not quite understand how it works out. Thanking you in advance, I send name and sign—A BEGINNER, Cheshire, November 25.

REPLY.—One of the most marvellous and interesting phases of bee-life is demonstrated in the fact that bees are able to raise queens (or mother-bees) from eggs, or from very young brood which in the ordinary course would produce workers only, the latter being "neuters," or undeveloped females. In order to realise the supreme importance of this to the bees themselves as a community, it must be borne in mind that the queen bee is the only fully developed female in the hive, and lays all the eggs from which the population is produced and kept up. Thus, if by any chance the queen is killed or lost the whole colony would inevitably perish, but for the means given them of raising a successor as mentioned above.

Supposing, then, that a stock of bees is suddenly deprived of their queen at a time when there are eggs and young brood in the comb; the first symptom of the loss is shown by an outward commotion, the bees running excitedly all over the front of the hive, as if searching for something. This continues for some hours, after which the bees settle down, and set about building the pear-shaped structures known as queen-cells. These are very much larger than the ordinary cell, having very thick, strong walls, rough and irregular on the outside, and absorbing a great amount of wax in construction, compared with worker-cells. Then follows the remarkable transformation required in raising a new queen. This change is wrought by feeding the selected eggs or larvæ with the substance known as "royal jelly." This latter is very stimulative in its effect, and is given in such abundance that the baby queen literally floats in it during the whole feeding period. In consequence, there is a rapid increase in development owing to the nature of the food given, and certain organs which in the worker, fed in the ordinary way, remain altogether dormant, are perfected, and the young queen hatches out in about fifteen days, as against twenty-one days occupied in the process by the worker-bee.

[3969.] *Honey Not Granulating.*—I enclose a sample of about 50 lb. of honey I obtained from my hive this year. I cannot quite understand why it has not crystallised, seeing that it has been kept since August in a cold larder. Will you kindly explain the reason for this, if there is one? Also the source of the honey. I believe it is chiefly from clover and limes. Reply in your next issue will oblige.—LONORWES, Abergavenny, November 25.

REPLY.—There is nothing at all uncommon in good clover honey (which yours is) not granulating during the year it has been gathered. In fact, the unusual thing about this season's honey crop is that the bulk of it has granulated far sooner than it should have done. Your sample is a good one, and if strained through fine muslin, to remove the particles of wax, it will be very good for table use.

[3970.] *Good Results from Late Feeding.*—Having been a reader of the B.B.J. and *Record* for some years, I thought I might ask your advice in the following circumstances:—Owing to illness, I could not feed my bees up for winter in September, as I hoped to do, so they had to wait until the middle of October, when I found two stocks nearly run out of stores. I had saved two lots of bees from the sulphur-pit and united them to a "cast," and fed both lots up with good, warm syrup, and was careful to cover the feeder warmly over, so as to keep the syrup nice and warm. I found that the bees of each hive took down about 4 lb. of syrup per day. It was made from recipe in "Guide Book," and I gave the two stocks over 40 lb. of sugar in this way. I did not open the hives at all during feeding, but on the first of this month (November) I examined the combs to see how the food stores looked. The result was most satisfactory, for all the frames were well filled and sealed over, looking very white and nice. Not only so, but I was surprised to find that one frame had quite a large patch of brood, and several others had some, most of it being capped over. Will you, therefore, kindly say:—1. Have I given enough syrup to

make the bees safe for wintering well? 2. Do you think the brood seen will hatch out all right, seeing that it is so late in the year, or shall I be likely to find a lot of chilled brood in the spring? I may say the bees are warmly covered down at the present time. 3. Will it be best to feed with syrup or candy in the spring, and what month should I start feeding?—C. L., Oxon, November 22.

Reply.—1. Quite enough to last till the spring—say, the first week in March—when an examination might be made, and if stores are running short a cake of candy given. 2. If warmly packed, as stated, the brood will no doubt hatch out all right. 3. Give candy only until weather is warm enough for bees to take frequent flights.

[3971.] *Making Roofs Watertight.* — I covered the roofs of my hives this autumn according to the directions given by one of your correspondents, with calico soaked in boiled oil, etc., and then painted the calico with two coats of white lead. Wishing to know if the result was satisfactory, I took off the lid of one hive and found, to my astonishment, that the top coverings were very damp, and even the chaff-cushions were not quite dry; but, on removing these, I found the lower coverings dry and the temperature comfortable. I cannot think that the rain has soaked through the roofs—they appear so strong and thoroughly waterproof. I therefore ask:—1. Would the damp and drops of moisture found between the coverings be caused by the heat in the hives? I found all my hives (four) in the same condition. The entrances are the full width of the hive-front, and are always left open, and I have cone escapes in the roofs. 2. Am I keeping the bees too warm, or is the condition normal? An answer in your valuable journal will greatly oblige. Name, etc., enclosed for reference.—Canterbury, November 23.

Reply.—1. We think you must have too many quilts above the frames, and that they are not sufficiently porous to allow of upward ventilation. Our advice is to remove all top quilts, save a couple of warm ones, and above these place the chaff-cushions. Examine a few weeks later and let us know if the change does not effect the desired improvement. 2. Leave the entrances open about six inches.

[3972.] *Extracting Wax from Old Combs.* — I enclose a sample of what should have been beeswax! for your opinion thereon? I cut the combs in September last, from a skep which had been left undisturbed for 18 months, and squeezed 14lbs. of honey out of the 28lbs. of comb removed. I then boiled the combs, first in a saucepan surrounded by water, then, as that had little effect in yielding any wax, the mass was boiled again in water itself. The second attempt produced a brown liquid, which I suppose had some wax in it, but to me it was about 10lbs. of plum-pudding-like stuff. It seems to contain bits of bees and débris of some kind. I have no doubt you will be able to explain what is to me a mystery, and I will be obliged if you will kindly do so.—H. S. S., Weybridge, November 22.

Reply.—Sample sent is simply the usual debris, or "offal," left after melting down old brood combs that are unfit for anything but burning. They have contained a good deal of pollen (which latter accounts for the weight), together with cocoons, left by successive batches of brood reared in the cells, and plenty of dirt. Any little wax remaining has, no doubt, been absorbed in the refuse left behind. As a rule, it will be found that very old black combs from skeps contain so little wax as not to be worth troubling about. In fact, "the game is not worth the candle" so far as regards extracting wax from them.

CONTROLLING BEES.

A REMINISCENCE OF WILDMAN.

(From *Scott's Magazine*, November, 1766.)

One, Mr. Wildman, of Plymouth, has lately made himself famous for his command over bees. Having come to London, in August last, he gave notice to Dr. Templeman, secretary of the Society for the Encouragement of Arts, etc., that he would pay him a visit on Wednesday, August 27, in the afternoon, in his bee dress. Several ladies and gentlemen who had heard of this intended visit were assembled at the doctor's.

About five o'clock Mr. Wildman came, brought from the city in a chair, his head and face almost covered with bees, and a most venerable beard of them hanging down from his chin, which rendered his appearance truly reverend. The gentlemen and ladies were soon convinced that they need not be afraid of the bees, and, therefore, went up familiarly to Mr. Wildman and conversed with him. After having stayed a considerable time he gave orders to the bees to retire to their hive that had been brought for them, which they immediately obeyed with the greatest precipitation.

One thing said of him is amazing, which is that Mr. Wildman, armed with his friendly bees, thinks himself defensible against any of the fiercest mastiffs; and actually did, at Salisbury, encounter three yard-dogs one after the other. The conditions of the engagement were that he should have notice of the dog being set at him. Accordingly the first dog was let

loose, and, as he approached the man, two bees were detached, who immediately stung him, the one on the nose, the other on the flank. Upon receiving the wounds the dog retired very much daunted. After this, the second dog entered the lists, and was foiled with the same expedition as the first. The third dog was at last brought out against the champion, but the animal, observing the ill-success of his brethren, would not attempt to sustain a combat, so in a cowardly manner retired with his tail between his legs. This extraordinary gentleman can tame wasps and hornets with almost the same expedition as he does bees.

On an invitation from Earl Spencer he went to his lordship's seat at Wimbledon, in Surrey, on September 17, where several persons of distinction were assembled. The Countess had provided three stocks of bees. The first of Mr. Wildman's performances was with one stock of bees hanging on his hat, which he carried in his hand, and the hive which they came out of in the other hand, which was to convince the Earl and Countess that he could take honey and wax without destroying the bees. Then he returned into the room, and came out again with them hanging on his chin, with a very venerable beard. After showing them to the company he took them out upon the grass-walk facing his lordship's window, where a table and a tablecloth were immediately brought out, and he set the hive upon the table, and made the bees hive therein; then he made them come out again and swarm in the air, the ladies and nobility standing amongst them, and no person was stung by them. He made them go on the table, and took them up by handfuls, and tossed them up and down like so many peas, handling them, however, very tenderly; then made them go into the hive at the word of command.

Near five o'clock in the afternoon, he exhibited again with the three swarms of bees—one on his head, one on his breast, and the other on his arm and then went in to his lordship, who was too much indisposed to see the former experiments. The hives, from which the bees were taken, were carried by one of the servants. He went into the room again, and came out with them all over his head, face, and eyes, and was led blind before his lordship's window. He then begged of his lordship that he would lend him one of his horses, which was granted. He then mounted the horse, with the bees all over his head and face (except his eyes), breast, and left arm, with a whip in his right hand. The groom then led the horse backwards and forwards by his lordship's window for some time. Mr. Wildman then took the reins in his hand and rode round the house. He then dismounted, and made the bees march upon the table, and commanded them to retire to their hive, which they accordingly did, and gave great satisfaction to the Earl, the Countess, and all the spectators.

Mr. Barnes, a gentleman, near Staines, in Middlesex, having a nest of hornets at the top of the inside of a high barn, sent to Mr. Wildman, and desired his assistance to destroy them. Mr. Wildman went upon the business, and took a hive with him up the ladder, and upon his approach to the nest, was stung by two of the insects, but he soon qualified their resentment, and put them into a hive, and afterwards drowned them.—J. SWALES, Sleights.

[The above extract is interesting, but whatever may be said of the present-day Pressman and his extraordinary vagaries in reporting "bits about bees," the above goes to show that his prototype of 140 years ago was not behind in the art of "piling it on" when portraying feats with bees, which, when stripped of the showman part of the proceedings, are common enough now-a-days. It is a good specimen of the art of garnishing a minimum of fact with the maximum of fiction.—EDS.]

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immedately following the receipt of their communications.

*** American made Bee Smokers.—We are much obliged to Messrs. Geo. Rose, Liverpool, R. Steele, Dundee, H. J. K., and Geo. Creswick, for post cards in reply to our request on page 470. The information has been sent on to Col. Shephard as promised.

C. BUTLER (Worcester).—Lantern Slides on Bee-keeping.—The slides belonging to the B.B.K.A. may be hired for use at lectures on application to the Secretary, Mr. Edwin H. Young, 12, Hanover Square, London.

W. E. B. (Yorks).—Much obliged for your note. The correction appeared on page 470 last week.

J. W. L. (Berks.)—County Council Grants to Schoolmasters.—We have no recollection of any notice to the effect of such grants as you name being made in our pages, and without some clue with regard to date when it appeared we cannot name the County Council referred to.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

JUDGING HONEY.

STANDARD SAMPLES WANTED.

The letter of Colonel Walker on page 482 of this issue contains, among other matter of much interest to bee-keepers, a valuable suggestion in connection with honeys from different sources, of varying grades and qualities. Regarding this there may be a divergence of opinion even among bee-keepers themselves, especially in dealing with honey collected from the various heaths, all included in the term "heather" honey. Even judges of more or less experience are not completely in accord on this subject, and it is mainly in connection with it that Colonel Walker's proposal is offered as a means of overcoming the difficulty. If a collection could be made of honeys gathered exclusively from flowering plants, trees, etc., and really pure samples be secured for the use, not only of judges, but of all bee-keepers who care to inform themselves on the subject, a much clearer view will be gained of the various qualities and grades of honey suitable for the show-bench as well as for market.

We trust, therefore, that the Council of the B.B.K.A. will take up the question, and that bee-keepers will do their share in helping to carry it out for the benefit of the industry.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office, 8, Henrietta-street, Covent Garden, London, W.C.*"

NOTES BY THE WAY.

[6121.] So the humble bee—according to the letter of Mr. Sladen, on page 446—has not become a prolific colonist in New Zealand. It is now some twenty years ago since a consignment of queen humble bees was sent out there by the late Mr. Geo. Neighbour and others, and as there is again a demand for more, one wonders why the queens sent out before had not established the genus at the Antipodes? Possibly the bee-eating birds are too plentiful in the haunts of the bees during the hibernating period; or the winter too mild to drive the queens into the ground beyond the reach of the birds. Let us hope the efforts of our esteemed friends Mr. Sladen and Mr. Hasson may prove more successful, and thus by the humming of the homeland humble bees add one more link to the ties of friendship with the old country.

I notice Mr. H. D. Davidson, on page 473, asks if bee-keepers have noticed the small insect-pest which disfigures sections, and I, for one, have a few sections in most seasons which show the tubular borings of these minute creatures; but I do not believe that it is more troublesome now with me than it was ten years ago. Whenever I observe a section with the marks on the face of capping, I despatch it off with next order, before the trouble has made headway. Our friend Mr. Seymour is probably troubled more than most bee-keepers in this way. The thinness of the wax capping on the face of the honey, and the consequent minuteness of the "burrower," makes it clear that it belongs to the waxmoth family, though of very small proportions. We shall be glad to have Mr. Sladen's opinion on the subject, if he is not too busy with the humble bees.

The question of sending honey-comb per railway at "owner's risk," is one that concerns every bee-keeper who keeps half a dozen hives. All of us have to send our honey to market, and most of it goes by railway to its destination, but often when it arrives there are leakages, showing damage to the honey, and as the railway companies will only accept consignments of honey at owner's risk, the poor bee-keeper has to bear all the loss. But the greatest injustice we have to grumble about is that our honey is charged at the highest rate for carriage, and yet we have no redress for the gross carelessness of the railway porters who, it seems, break nearly everything they handle. I think our B.K. Associations should take this matter up, and secure better terms with the railway companies, also honey should be put into the lowest rate of carriage if the sender has to bear the loss if goods are damaged.

I notice in *Gleanings* a method of hiving bees with a looking-glass. Mr. Suppe says his folks can, by reflecting the light on the swarming bees, lead the bees to a particular spot, either to the entrance of the hive they wish them to go into, or on to a low bush, or even weeds, so that the swarm can be easily hived. He says the reflected light from the glass (12 in. by 12 in., or 24 in. by 20 in. sized mirrors are the sizes he uses), should have a slow but constant motion on the swarming bees to lead them to the desired spot. Do not let us forget to give the plan a trial next season.—W. WOODLEY, Beedon, Newbury.

JUDGING HEATHER HONEY.

CLASS FOR BLENDS OF HEATHER HONEY.

[6122.] With reference to D. M. M.'s notes on "Knowing and Judging Heather Honey" in B.B.J. of last week (page 472), it is quite true that our general ignorance of what is real ling honey is very great. Except, perhaps, in some of our quite northern counties, the peculiar type gathered on Scotch moors, and well described by D. M. M., is never met with. He is quite right as to its fragrance. In Scotland, when the heather is in full bloom, the moor itself smells like a gigantic honey-pot. Those who have once smelt and tasted the real article are not likely to make future mistakes. On the other hand, honey gathered from the more showy heaths, *Erica tetralix* and *E. cinerea*, is common enough in the south and west of England. It would be more correct to say that its blends are common; but whether pure or blended, the honey is quite distinct from ling honey.

It may be remembered that in my paper on "'Judging Honey," published in B.B.J. of March 31, 1904, I suggested that the "Heather" Class should be restricted to ling honey, and that other heather honey and its blends should be staged in their natural classes, medium and dark. I still think this advisable, and the only way to prevent confusion. At present, possessors of good blended honey hardly know what to do with it. The first prize in the "medium" (open) class at the late Plymouth Show fell to an excellent honey, probably clover, with, at the owner's estimate (as I subsequently ascertained), about one-sixth heather, which, from the date of harvesting, cannot have been from ling, whether the latter grows in the neighbourhood or not. This honey the exhibitor had not ventured to send to London shows, where heather honey has a class to itself, for fear of disqualification. In this way, good honey fails to find a place, an unsatisfactory state of things which would cease to exist if my recommendation was adopted.*

I would further recommend that the B.B.K.A. Council should acquire specimens of genuine Scotch heather honey and produce them at suitable seasons for purposes of instruction. Other flower honeys of distinct qualities might be procured and added to the collection, so that judges, or would-be judges, might have an opportunity of improving their knowledge, and in this way a nearer approach to a general standard of taste be effected.

Heather and Honey-dew.—It is doubtless true, as stated by "D. M. M.," that honey which owes its dark colour to honey-dew is often put forward as "heather." Not necessarily for dishonest reasons. I have a friend whose hives are in a park famous for its oak trees, and about four miles from heather. Year after year his bees bring in the honey-dew. I have heard them working with the noise of swarms on the tree tops. So "heather" sections never fail on my friend's breakfast table, and meet with approval, although to a trained palate the honey is mawkish and distasteful.

Heather honey, like all good honey, is clear and bright, and of a pleasing colour, that from ling being, in my experience, the lightest; this probably is variable. I believe that the muddy-brown colour of honeys sometimes seen at shows and elsewhere—a muddiness which no straining can eliminate—is nearly always owing to the presence of honey-dew, or, more accurately, to impurities collected by the honey-dew after its appearance on the surface of leaves of trees and shrubs. Whether produced by secretion from the leaves or ejected on to their surface by aphides, honey-dew appears to be at the outset limpid and nearly colourless, but the excrement of insects and the minute organic particles with which the air is filled soon gather upon it, and destroy its limpidity. And the reason why, sometimes, honey-dew as stored by the bees is fairly light in colour is that it was gathered shortly after secretion or being deposited, and because other conditions were favourable. If gathered after long drought it will be more or less badly defiled, and in the neighbourhood of towns the honey thus obtained will be almost black.

Wonderful harvests may be gathered from honey-dew. The old bee-masters knew this well, and in the choice of position for an apiary the neighbourhood of woods was a constant recommendation. Bees naturally forage where booty is most plentiful and can be speedily gathered. For this reason, and because the conditions that produce honey-dew are unfavourable to a secretion of nectar, the ordinary growth of clover on lawns and pasture lands may be quite neglected, and, as is often the case with me, bell heather blooming within a few hundred yards of the hives may produce nothing, and remain unvisited. It is the difference of locality and atmospheric conditions that gives rise to heated discussions as to whether certain flowers are honey producers or not. As regards ling, I have ascertained that in many parts of Devon where it flowers freely bees proclaim a general strike about the end of July, and do little but loiter, so that no more honey

* We are glad to say our correspondent's suggestion with regard to a class for heather blends of honey has already been carried out in the draft prize schedule submitted to the Council of the R.A.S.E. for their show at Derby in June next.—EDS.

is harvested. Perhaps the ling of this part of England is of a different quality from that of Scotland; undoubtedly it is less fragrant. How stands it a little further north, in Surrey for instance?

While pollen is easy to identify, by means of an ordinary microscope, with specimens for comparison, many of which will be found beautiful objects, the source of honey is often hard to determine. There are flavours known to me that I cannot identify with any special flower, and of which I should be glad to know the origin. I feel sure that to others, as to myself, the collection of various honeys suggested above would be of great interest. It need not be costly, for doubtless the owners of especially identified honeys would, for the good of their fellow bee-keepers, gladly present the B. B. K. A. with a specimen. — H. J. O. WALKER (Lieut.-Col.), Budleigh Salterton, S. Devon, Dec. 2.

[The collection of honeys suggested by our correspondent would be both valuable and interesting from the educational point of view, but samples would need to be carefully tested by qualified bee-keepers to determine the sources from which the honey was gathered.—EDS.]

A BEE-MAN OF THE OLD SCHOOL.

A VETERAN OF THE OLD SCHOOL.

SEVENTY-ONE YEARS AMONG THE BEES.

[6123.] By the death of Thomas Scott, who passed away on October 26 last, aged seventy-six years, we lose a veteran who might justly be termed a patriarch among bee-keepers. Actively connected with the craft for seventy-one years without a break, his record would be hard to beat. We learn that Thomas had kept bees ever since he was five years old, at which time he became the proud possessor of a skep, and during his first year of ownership had used his weekly pence in buying sugar to keep his bees from want during a season of scarcity. He was well known throughout Ribblesdale as a successful bee-keeper of the old school, keeping as many as fifty skeps at a time, and supplying all and sundry with honey taken from them, rarely at less than a shilling per pound. But notwithstanding the fact that bee-keeping was almost his sole employment and means of living, he could not be induced to look with any favour on the frame-hive or on modern methods of management, and so he remained from first to last a skeppist.

Thomas was, from the crown of his head to the Lancashire clogs on his feet, a bee-man of the old type, as the photograph taken shortly before his death, shows. The neat, well-made straw hackle, and the best of all weather-proof skep covers (known in his county as a "pan mug"), together with the useful stand to keep the bees above ground, all tend to show that he was fully up to date according to his lights, and well knew how to keep his skeps in the best of order and condition. Our old friend's idea of a good honey harvest from one skep was about 20 lb. to 25 lb., and he would no doubt turn a very "deaf ear" indeed to the "yarns" told—in print—by bee-keepers of to-day, about 150 lb. or 200 lb. of surplus from a single hive. And so he remained to the last, happy in his own

notions on the subject, and we may regard these little foibles of our old friend with good-natured and kindly tolerance, and join in the general regret at the loss of a very worthy old bee-man.

NOTES FROM A CORNISH BEE-KEEPER.

FORMALIN AS A CURE FOR FOUL BROOD.

[6124.] It would seem as if all notice of formaldehyde—or formalin—as a cure for foul brood had disappeared from the pages of our JOURNAL, seeing how long a time it is since anyone has had a word regarding it. I, therefore, now write to say that whether other bee-keepers have or have not been successful with this remedy, I have found it a great boon in my own apiary, and with the hope that my experience may be useful to others, I gladly give the plan of treatment which has succeeded with myself. In the spring, when weather is warm enough for bees to fly daily, remove all empty combs from brood-nest, place them in the fuming box, and fumigate thoroughly. This done, return one frame at a time to the hive under treatment as required, taking each frame direct from the fuming-box to hive. If two or more diseased stocks are being dealt with at same time, remove centre comb from one and give to the other as soon as brood is seen in the combs which have been fumed, filling all vacancies thus formed with combs fumed as before.

By this method ten or a dozen stocks can be treated at the same time, and if the district is a moderately good one, a fair harvest of honey may be secured from the colonies dealt with by placing the diseased centre combs taken away in one hive specially reserved for the purpose. The bees of the last-mentioned stock may—if strong enough to be worth saving—be shaken from combs and dealt with on the starvation plan at close of the honey harvest. I practise the plan given, and have only lost one stock from foul brood; this I destroyed outright as worthless. Three years ago, when the district was badly affected with the disease, I treated a neighbour's stocks by the method given, and have since increased my own apiary to fifty colonies, all strong, and in good frame-hives. Not only so, but, so far as I can hear, there is no foul brood within several miles of us at the present time.

This is a good district for honey, and I find that all goes on well so long as bee-keepers will work hand in hand, and co-operate harmoniously together for the good of all. I took this season from a neighbour's hive in our village, 108 capital sections; while for another friend, five miles away, I removed 151 splendid ones which were sold at 10s. per dozen. The same man's bees also gave him a fine set of shallow-frames for extracting, and he only started the season with three frame-hives. He has increased his stocks to five, and sold over £10 worth of honey, besides having some still on hand. This should, I think, be a reply to the question "does bee-keeping pay"? I answer, it does in a well managed apiary.

May I add a line on the question of so-called bee-enemies? One of these, the Blue Tit, visits my apiary every spring, and I regard it rather as a helper than foe to the bee-keeper. I have never seen this tit kill a bee, after many days' watching, but it carries off plenty of dead ones cast out of hives by the bees themselves. Sparrows, too, are, according to my experience, only drone-eaters. I have also had an excellent chance of watching the Bat, which has been termed a bee-eater. Near my bedroom window there is a hole, and from this I have, this summer, seen as many as nine Bats issue, one after the other. This made me curious to see what they were after, so I went to a part of my garden where I could see them flying in front of the light in my window. And from there I plainly saw the Bats were catching moths. To prove this, I shook some shrubs where moths usually rested, and this made the moths take wing, and brought the Bats after them in quick style for a feast. The worst bee-enemy I know of is the toad, and I unmercifully kill these whenever found near my hives.

(*Continued on page* 486.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Fernie, a part of whose bee-garden is shown on next page, may truly be classed among the bee-men whose interest in the craft does not diminish with length of years, but rather increases with the flight of time. That this is so the following notes, written at our request, show. He says:—

"In response to your request for a few notes to go with the view of part of my small apiary, I fear there is little to tell that can possess any interest for your readers. My first task in connection with bees dates back to the time when, as a very small boy, while playing near my father's bees, I was sent by my mother to tell father that the bees had swarmed, and were clustered on the topmost branches of a tree. But illness came, and my father died the year following, as did also his bees for lack of care and attention Thus ended the first chapter of my bee experiences.

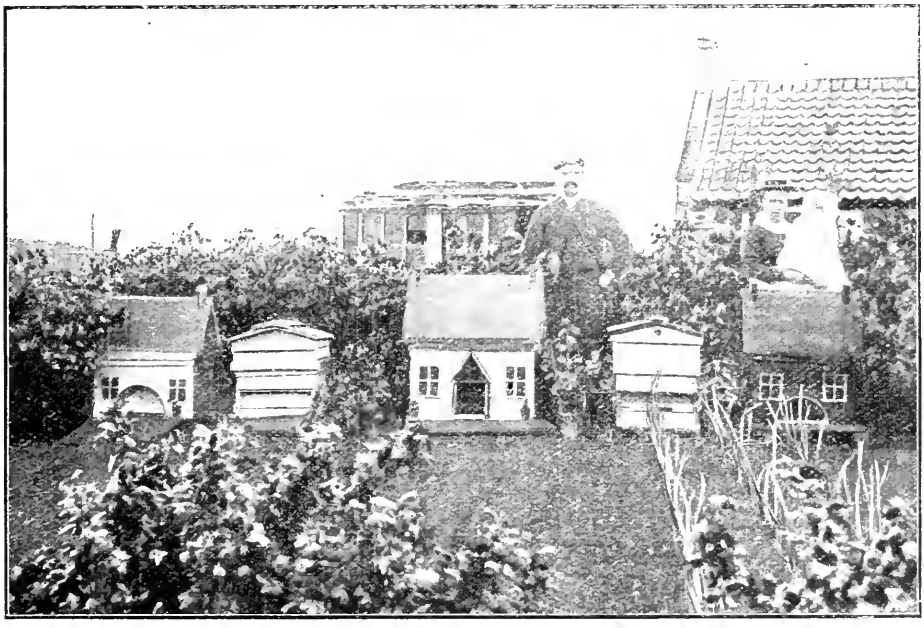
"I always think a country garden is

incomplete without a hive of bees, and in carrying out this idea I started bee-keeping seven years ago by purchasing a weak stock in an old frame-hive for £1; that was my first mistake. The bees were said to be strong—in fact, 'ready for supering,' and not knowing any better, I closed the bargain.

"Next day I got a bee-keeping neighbour to examine my purchase, and he told me they were weak, and would need to be fed, for the bees barely covered the four frames that had brood in them, and as it was then June 20, they gave me no surplus the first year. Strange to say, however, my bees were the first to swarm in this district the following spring. Not only so, but I had 60 lb. of fine comb-honey from them, besides the swarm. I have since then climbed the ladder, step by step, increasing the number of my stocks gradually. In 1904 I worked almost entirely for swarms, and in this way did very well. No doubt some of your readers will wonder at anybody running bees for swarms alone, but it pays here very well, as I will endeavour to explain. First, then, let me say, a quarter of an hour or less with a good horse or bike brings me face to face with Mr. R. Steele, the well-known bee-appliance maker, of Wormit, Dundee, who requires 200 or more swarms every year; and, being on the spot, I get the swarms delivered before they lose any weight; nor have I any carriage to pay. Then, with regard to selling honey, I have no trouble in getting 10d. or 1s. per lb. for either sections or in jars. I used to think selling was the worst part of the bee-business, but since I began to take prizes at our local shows I can sell all my own crop and more if I had it. I mean to increase the size of my apiary in the near future, but being surrounded by neighbours' gardens and a public road within a few yards, it is necessary to be very careful not to cause annoyance, as my employer is a J.P., and his motto is "Peace on earth, goodwill toward men.' The hives seen in view are all my own make. The cottage style was taken from 'The Homes of the Honey Bee.' They look well, but are not good for tiering boxes, owing to the narrow way you have to draw in roof. They are all made from grocers' packing boxes. I always make sure that the roofs get a special covering of paper-felt, and are painted twice a year; in consequence, I never had a damp hive yet. This season I started rearing my own queens, and this tends to make the hobby more interesting, besides saving money.

"I have secured some of Doolittle's yellow-banded bees from Mr. Steele in exchange for blacks, and am expecting them to do well for me next year. They look well, and appear very active bees.

"I have probably said enough to show that bee-keeping is a success with me,



MR. WM. FERNIE'S APIARY, FINCRAIGS, GAULDRY, DUNDEE.

while I have only lost one hive in seven years, and never yet had a touch of foul brood. The shed seen in background is my store-house for bee-appliances. The figure seen on my left is the goodwife and the baby. She is a capital hand at hiving a swarm, and also helps in preparing honey for show or market.

"In closing, I must not omit saying that my success is mainly owing to the "Guide Book" and our B.K. *Record*, which I weary for every month. Wishing all bee-keepers a very prosperous New Year, and a big harvest in 1906."

("*Notes from a Cornish Bee-keeper*" *continued from page* 484.)

About "robbing in autumn," I think that bee-keepers themselves start this by carelessness in leaving bits of comb containing honey about the apiary. My own practice is to leave my hives undisturbed for a week or ten days after removing the season's surplus honey. This gives the bees time to settle down after being deprived of their stores, but if any examination is really needed, I only open one hive at a time, so as not to arouse the robbing instinct among the bees. Should there be a diseased stock to open at any time, for the purpose of removing combs or honey, I use two strongly carbolised cloths, one of which is laid on the ground for an outer-case—or "lift"—to stand on and catch any drip of honey that may fall to the ground. The second cloth is laid over the frame while returning it to the hive, so that no flying bees may alight on the dripping honey. No honey removed from such hive is ever sold, but after being boiled gently for two and a half hours in an equal weight of water, I use it as bee food, and have never had any stocks affected with the disease in this way.

In conclusion, may I say that any bee-keeper who reads these lines and needs information as to my method, is cordially invited to pay a visit to my apiary; if our Editors will kindly give my full address (sent herewith), to anyone requiring it.—T. STAPLETON, Cornwall, November 30.

[The use of formaldehyde—or formalin—as a cure for foul brood is not so familiar to present-day readers as to those of older date. We therefore print the following extract from *Gleanings* to make it clear.—EDS.]

Seeing an item in *Gleanings* for October 1 in regard to formaldehyde not being a sure cure for foul brood, I will give some of my experience with it, as I have used it in my business as inspector of apiaries for Santa Barbara Co., Cal.

At first I did not have the success that I desired; but I did a little differently each time, and finally have come to the conclusion that it will cure foul brood and black brood if rightly used. It has done the work all right, as I have used it of late. I have treated several apiaries, varying from two to over a hundred colonies in each, and have cured all that I have treated under my present system. Now for my mode of treatment:—

I use a Goodrich atomizer No. 4, and formaldehyde, equal part with water. Go to the hive to be treated, and raise the body of the hive in front enough to work so as to spray the liquid on to the bottom board. The bottleful will be enough for about six hives for one application, but I make three a course of treatment. I make the applications about two weeks apart, and apply it cold, and do no more than to spray it on to the bottom board. If it is sprayed on to the combs it will kill all that it touches. The gas dries up the diseased matter in the cell, and the bees clean it out and make everything shine, and the colony soon becomes strong and prosperous; but the hive must have ventilation or the gas will asphyxiate the bees, and that makes a bad matter worse. If the hive is tight, the cover must be raised by placing something between it and the top of the hive, about $\frac{1}{4}$-in. thick. After spraying the liquid on the bottom board, set the hive back in place, and the work is done.—GEO. E. HINKLEY in *Gleanings* (American).

BUYING SWARMS.

LOSS OF WRIGHT IN TRANSIT.

[6125.] The query No. 3967 (page 477) brings to my mind an unsettled claim I have on my books. Briefly, the facts are these: On June 17, a person wrote me asking if I could supply him with two swarms weighing 5 lb. to 6 lb. each, at 12s. 6d., by the following Tuesday or Friday. I replied that I could not guarantee a swarm of that weight to come off on those days, as mine were all natural swarms, but would send the best that came to hand by that date (June 22). He replied, "If you can forward me two swarms by to-morrow, well and good; otherwise cancel order." A swarm came off on the 22nd, and was at once sent. On the 27th I received a postal order for 5s., and letter saying he thought it too much for the swarm (this was the first intimation of dissatisfaction I had received). I indignantly refused to accept it, saying, "If you were not satisfied with the swarm, why did you not at once return it, or ask for some explanation, and not insult me with offering the price of a single queen, in payment for a swarm?" On July 1 I got a reply, admitting he had "erred in judgment" by not returning the swarm. The next move was a box arriving at the station for me from my customer, which I

opened in the presence of the station-master and others, and found it contained a swarm of suffocated bees. The box was small, and ventilated only by two small holes cut in the sides, and pieces of zinc with tiny holes pierced in it *nailed on the outside*. I refused to accept it.

Now, sir, I did my best to supply this person with a swarm *on the day he required it*, and I feel aggrieved at the high-handed manner payment was tendered for same. Thirdly, the weight of box and bees when it left my hands was 16 lb., the box when empty weighs 12 lb., leaving 4 lb. net of bees, and the cost of carriage was 1s. 5d. I send name for reference.—SURREY, December 4.

BEE-KEEPING AS AN OCCUPATION.

[6126.] May I say a few words in reply to your correspondent, "Tyke," mentioned in the leading article last week? First, then, I sincerely hold to the statements made on page 454 regarding bee-keeping "Tariff Reform." Having no wish to deceive, I stated what I believe to be actual facts, from my own experience. This experience has been gained chiefly through visiting bee-keepers in Lincolnshire, as an expert for our County B.K.A., and the delivery of over twenty lectures during the last eighteen months for the Lindsey and Kesteven County Councils. To delicate people, and schoolmasters in particular, I would especially advocate bee-keeping as a hobby, because its interest as a health-giving and paying pursuit is likely to be spread far and wide. I cannot, however, advocate bee-keeping solely as a means of livelihood, and those persons who ask questions relating to this are, to my mind, not fitted for it, or else they are not sincere. Our Editors will at least agree with me in that the most absurd questions are sometimes asked by the embryo bee-keeper. To the latter a little knowledge is a dangerous thing, therefore I venture to surmise that those who ask if a comfortable living can be made by bee-keeping have little or no experience in the craft, for I cannot imagine an intelligent and qualified bee-keeper asking the question. All have heard of "spare time employment," and bee-keeping is of this class; but who ever heard of the wages earned by those devoting their whole time to that employment? — DESUNT CETERA, December 5.

THE "COWAN" EXTRACTOR.

FOUR-FRAME VERSUS TWO-FRAME.

[6127.] Will any reader who has had practical experience of "Cowan" extractors (two-frame and four-frame) kindly give me the benefit of his opinion with regard to the merits or demerits of the four-frame machine compared with the smaller one? Also, would such a machine fitted with ball bearings be easy to work? Again, are the genuine "Cowan" machines easily obtainable? I ask this question, because of having seen it stated that there are imperfect imitations on the market. Perhaps our Editors will also kindly tell me what is the diameter of the cylinder in a "Cowan" four-frame extractor. Name enclosed for reference only.—SPEED, Cornwall, December 2.

[We presume our correspondent refers to the "Cowan" reversible extractor, though it is not so stated. There is no specific diameter of cylinder for the four-frame reversible. All the maker has to do is to allow sufficient room for free working between cages and cylinder. The space required for reversing the combs will do the rest. There have been "Cowan" extractors of this type staged at Royal shows of late years by English manufacturers that were sufficiently accurate in make to receive first prize at the hands of Mr. Cowan himself, who judged on the occasion, so they may be accepted as genuine. —EDS.]

BEE-KEEPING AS AN OCCUPATION.

[6128.] Referring to your leader of November 16 and your reply to a correspondent, who signs "Tyke," in Thursday's issue, may I be allowed to say that, from my own experience of bee-keeping and its possibilities as a means of livelihood, I consider you were not unduly pessimistic, but rather gave a very fair opinion of the merits of the case. With your permission I will therefore give you a brief outline of my recollections and experiences. My earliest recollections date from the year 1869, and it was impressed on my memory by two things. First, the year I first went to school, and second, the arrival of a straw skep at our house, which, when it came home from the heather, turned the scale at 110 lbs. Honey was always a delightful morsel to me, and that year, after the bees were driven from skeps, wooden boxes, etc. (none of the sulphur pit with my father) and the combs removed for running or pressing, a liberal portion was left in the tops of the hives, we smaller fry fairly revelled in our share. But there was almost no honey next year. The few pounds made from the bees in those days was a very acceptable addition to the income of our house, which was never much more than the half of £100, which "Tyke" would be contented with. During the whole of the seventies the bee industry was carried on with varying fortunes, sometimes returns were good and sometimes very poor indeed.

My own practical experience dates from 1882. In the autumn of that year my

father, being unable to get away to take the hives home from the heather, I was sent for them. I got the bees home all right, but had to be led home myself, for, although I only got two stings—and these directly after starting to pack—both my eyes began to swell so rapidly that they were almost sealed before I had finished, and I could see nothing for the rest of the day. Those two stings, however, helped to make me a bee-keeper. The bee-keeping instinct of three generations was up in arms against having one's eyes "capped" through a couple of stings, and so, getting a hive of my own, I set about the study of the bees. In increased my own stocks, and my father, from keeping five or six hives, also increased his, till, in 1887, we had twenty hives between us. That year we cleared £20, after paying all expenses, and increasing the number of our stocks to thirty. Next year, however, the disastrous "1888"—so well known as being the ruin of many apiaries—we did not make twenty pence. From twenty hives we had at the heather four were brought home dead, and those that reached home had to be fed to keep them alive. The following year helped us a little, and then in 1890, there being no work in the district, we removed to Glasgow, so that the bees had to be regretfully parted with. For myself I thought less of the money loss than of parting with my favourite hobby. I never even saw a bee hive for about twelve years. Then my father brought three hives to Glasgow with him and won prizes for honey at local flower shows, carrying on his bee-keeping till he died. Meantime, I had wandered further afield, and when six years ago the opportunity came for settling down here I had bees in my mind. Then some of the local bee-men, hearing that I was the son of a well-known bee-keeper, came to me for advice, and so I was soon working at the industry as heartily as ever, full of the old enthusiasm, and once again a full-blown bee-keeper.

It is of these later years that I wish to speak. During that time till this year we have had very indifferent seasons in our part. I have been keeping bees those years for the pleasure only, but, on the other hand, I have been at no expense. I began the season with three frame hives, of the most modern type, fully equipped with section racks, etc. These cost me 24s. each, and I have increased my stocks this year to six hives, two of which I gave to friends who wanted to start bee-keeping. Still I am not a penny out of pocket. I ran two of my hives for honey, and got 40 lbs. of surplus from one and 40 lbs. from the other before taking the hives to heather. The heather season, however, was a complete failure, for, although my stocks were crowded with bees and brood when sent, I did not get an ounce of section honey. However, they did not require feeding on returning, and this was something to be thankful for.

Given a fair year and running my bees on strictly commercial lines I could make about £1 per hive from them; but then I have a good market for honey, and have had as much as 1s. 3d. per lb. for heather run out of combs taken from the brood chamber, and nothing less than 10d. and 1s. for clover and bean sections. These prices will probably make some of your correspondents envy me. But bad years have to be taken into account. In 1904 I only got twenty sections from three hives sent to the heather, and "boiling over" with bees at the time. The past season of 1905 just suited our heavy "Carse" soil. We had a luxuriant crop of charlock, or shallocks, as we call it, and I secured a lot of honey from it. The field beans also were splendid, and next a fine shower of rain put the clover in grand condition. Everything was in our favour, and we got the full benefit. A great part of my harvest was consumed at our own table, for both myself and good wife and all our offspring are very fond of honey from our own bees. My own opinion of bee-keeping as a means of livelihood is that it would be a precarious one, unless joined on to a steady going business in appliances. We must remember that for every year we can make £1 or £2 per hive for the honey taken, there would be another year when less than 10s. worth per hive could be secured. But as a welcome addition to small and moderate incomes bee-keeping is very good indeed, besides being a pleasant and healthy way of earning it. In conclusion, let me say I re-started taking in the "B.B.J." after dropping it awhile, not keeping bees, and will always take it as long as I have bees; but it is more than human nature can stand to read about bees and not have them to work amongst. I am indebted to its columns for a confirmation of some ideas re queen raising, which were generating in my brain, and this winter will find me prepared for the coming season, which I hope will be a good one for the JOURNAL and all its readers. I send name and sign —CARSE OF STIRLING.

LEAKY HIVES.

[6129.] Like your correspondent "Canterbury"—whose query appears on page 479—I have been troubled with leaky hives. The trouble is, in my case, caused entirely by the fact that "sapwood" is used for hive material; it lets water in like a sponge. I cured the roofs by covering with zinc, but the hive walls let the wet

in copiously. The cure may be effected by coating with paint made of red and white lead in equal parts. It is entirely wrong to use "sapwood" for hives, and the maker who supplied mine has, by so doing, lost a subsequent large order from me.—AJAX, Cornwall, December 2.

AN IDEAL BEE-DISTRICT.

[6130.] Many thanks for your kindness in inserting the picture of my apiary in B.B.J., and also for your kindly remarks. As you imagine, this place is delightfully situated. The picture postcard enclosed shows the view from our front windows. We have very little really cold weather here, and, indeed, I cannot call to mind a single week for the past eight years during which the bees have not been on the wing.

If yourself, or any of the B.B.J. staff, are ever in this neighbourhood, and give us a call, you will be accorded a hearty welcome from my good wife and self.—S. HARBORNE, St. Buryan, Cornwall, December 3.

[Much obliged for your courteous invite, and will be very pleased to avail ourselves of it if occasion offers.—W. B. C.]

Queries and Replies.

[3973.] *Candy Making.*—Seeing Br. Colomban's recipe for making soft bee-candy in B.B.J. of September 14 (page 363), I enclose a sample of same which I made yesterday from same. I adhered closely to the recipe given, with exception of boiling it thirty-five minutes instead of twenty, as the mixture would stick to my finger before that time. Will you kindly tell me in B.B.J. if it is all right for the bees, as I am glad to use a candy with honey in it, as I happened to have some unripe honey. I have some on hand which I extracted from uncapped sections.

Never seeing in your pages any news from the sunny South Downs, I thought a few notes from an amateur might be of interest to beginners like myself. I have sixteen stocks of healthy bees, have never had any foul brood among them or lost a colony in winter as yet. I keep the hives on an allotment on the border of Brighton. Last summer was the worst season I have had, the flow only lasting about a fortnight, and some of the stocks had already commenced to kill off the drones. In consequence of the sudden stoppage of income the bees did not finish some of the sections, hence my having the honey for candy-making. I have always made it before with best cane sugar only, according to recipe in "Guide Book." Our honey here is very good in quality, of light golden colour, and it candies beautifully. The bees and garden are my hobbies in my spare time; my wife takes the task of looking out for swarms, and could tell some amusing tales of her experience in that line. I conclude by hoping for a reply *re* candy making.—J. L. MAJOR, Brighton, December 2.

REPLY.—On the broad question of its suitability for bee-food, your sample will answer the purpose well, but it is rather too soft to be quite satisfactory; probably your fire has not been brisk enough. Anyway, the sample mentioned on page 464 we had from Br. Columban himself, was very much firmer than yours, and it had only been boiled for twenty-four minutes. We advise another trial with a brisker fire and a shorter time for boiling. The bees will no doubt like your soft candy immensely, and probably dispose of it in double quick time, if not made a little stiffer.

[3974.] *Planting for Bee-forage.*—I shall be much obliged if you would advise me, through the "Correspondence" column of B.B.J. as to the following: — The district round here does not yield large quantities of honey; at least, not until the heather comes into bloom. I can spare about forty square yards of garden for growing "honey-producing" flowers, so would be glad to know: — 1. Whether I should get an appreciable amount of honey from that area? If so (2) What would be the best flowers to get?—HY. LEIGHTON, Rugeley, November 27.

REPLY.—1. So limited a space as forty square yards, while very useful if judiciously planted, would hardly yield enough honey to make an appreciable difference in your honey harvest. Its practical use would be to stimulate the bees in brood-rearing, and help to make them strong for the main crop, which must come from the fields, orchards, and moors.

[3975.] *Gorse as Bee Forage.*—Will you please inform me, through the columns of the "B.B.J.," if the common gorse or furze is good bee forage, whether it yields honey or pollen, or both, and if the honey, if any gathered from it, would be suitable for table use? I am troubling you with the above questions, as I am only a beginner in bee-keeping, and a friend has offered me room for one or two hives close to a lot of gorse, and I should work for section honey. I could send a sample of honey taken from the place (but it came from a skep where the bees were stifled with sulphur), if that would help to answer the above question.—Thanking you in anticipation I enclose name and address, and sign myself—GORSE, Gloster, December 5.

REPLY.—Broom or gorse, where grown in quantity, is very useful in early spring for pollen, but does not yield much honey,

nor is the latter of good quality for table use, being dark in colour, and of poor quality.

[3976.] *A Beginner's Queries.* — I have just purchased two skeps of bees, both heavy (about 35 to 40 lb. each); one is a 1904 swarm, not touched since it issued. The other is a swarm from it. This was the only one known this year, and came off early in June. From the same party I bought a "W.B.C." frame-hive, into which a swarm had been put about four years ago. The hive, however, had been neglected, and this summer (about July, I am told), wasps got possession of it and turned the bees out. The hive has 10 frames of comb all fully worked, and the bees had filled about 8 of the 21 sections placed above. The wasps, however, had robbed these also of all honey, only bare combs remaining. I therefore ask—1. Could wasps turn the bees out? If all is well I should like to transfer one of the skeps of bees to this frame-hive in the spring. 2. Which lot would be best, the 1905 swarm or the parent or 1904 lot? There is no foul brood in this locality, and the bees and hive mentioned originally came from a healthy apiary. The bees of the party I purchased from are well known to be free from disease, and he seems quite certain the wasps turned the bees out; but they have no one to look after the hives. 3. Would neglect of changing queen after four years cause the stock to get weak and the wasps get possession that way? It seems a queer case, because all seemed all right up to July when the bees left the hive, and disappeared. Do you consider it quite safe for me to use the hive, and should I remove the old combs from body box and super, and put in new frame foundation? I shall paint and wash the hive thoroughly in any case. Kindly advise me. I have one weak lot of bees in a 20th century hive, which I robbed too heavily this year, besides the above, and these I am feeding with candy. This is my first year with bees, and I have no knowledge except that gained by reading your "Guide Book" and B.B.J. carefully every week since I only started in May last.—I send name and sign—PERPLEXED, Llandiloes, Glam., November 21, 1905. P.S.—You would perhaps notice I wrote you for advice on the weak lot of bees a day or two ago.

REPLY.—1. Wasps do occasionally "rob out" a hive, and the bees of the latter disappear. Usually they join some other colony in the same apiary, so that the wasps do not "turn the bees out," but simply carry off all the food, and the bees desert the bare home left. 2. The parent hive of the 1904 lot, having swarmed in 1905, will now be headed by a young queen, and is best for transferring. 3. It may be co, but it is quite safe to use the hive if free from disease.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
November, 1905.

Rainfall, 4·36 in.	Minimum on grass, 19° on 19th.
Heaviest fall, ·73 on 10th.	Frosty nights, 14.
Rain fell on 20 days.	Mean maximum, 47·3.
Above average, 1·09 in.	Mean minimum, 34·2.
Sunshine, 63 9 hours.	Mean temperature, 40·7.
Brightest day, 27th, 5.3 hours.	Below average, 2·2.
Sunless days, 8.	Maximum barometer, 30·19 on 16th.
Below average, 6·8 hours.	Minimum barometer, 28·83 on 13th.
Maximum temperature, 53° on 1st and 26th.	L. B. BIRKETT.
Minimum temperature, 22° on 19th.	

NOVEMBER RAINFALL.

Total fall, 3.19 in.
Heaviest fall, 0.51 in., on 10th.
Rain fell on twenty-two days.
—W. HEAD, Brilley, Herefordshire.

Notices to Correspondents & Inquirers.

Honey Samples.

GREEN ISLE (Co. Louth).—Your sample is of very good quality indeed. It is to our mind entirely from white clover, and would stand well on the show-bench anywhere.

H. W. (Salop).—No. 1 sample is not from heather at all. Being partly granulated its colour, when liquid, cannot be judged, but it is good in flavour, and smooth in grain. No. 2, except for being not very well ripened, is a light-coloured honey of fairly good quality, but does not equal No. 1 in flavour.

Suspected Comb.

INQUIRER (Glenlivet).—The appearance of the dead larvæ in comb sent pretty closely follows the description of the latest form of bee-disease termed "black brood" in "The A B C of Bee-culture." There is none of the brown ropy stickiness characteristic of rotting foul brood. Our present advice is to remove the frames where sealed dead larvæ are found, and winter the bees on such combs as are free from sealed brood-cells. Then in spring keep careful watch on the brood being reared, and if any of it fails to hatch out, we should not trouble any longer with it, but destroy all the hive contents and disinfect the hive.

*** *Some Queries and Replies, &c., are unavoidably held over till next week.*

Editorial, Notices, &c.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of November, 1905, was £885.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 8, *Henrietta-street, Covent Garden, London, W.C." All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*. 8, *Henrietta-street, Covent Garden, London, W.C.*"

AMONG THE BEES.

WELL-RIPENED HONEY.

[6131.] Once upon a time I was jeered at for my system of supering, and especially for piling up and leaving racks of sections so long in the hives, but public opinion, here and abroad, is coming round to the point of recognising that well-ripened honey is the only pure honey, and that an injury is done to the industry by withdrawing surplus honey too soon from the hive. "Now-a-days it is pretty well agreed that it is better for the honey to remain on the hive for several weeks," is just a sample of what is written on the subject. The effect of travel-stains complained of by some is not prominent here, principally, perhaps, because we have not a superabundance of propolis, and also from the fact that there are no superfluous drones. It appears to me that comb-honey *matures* on the hives, and what is left on shows a more marked consistency and flavour.

The Claustral Chamber.—Little notice seems to have been taken of this invention, but the thought strikes me that the inventor, or his representative, has sought to court failure by placing so prohibitive a price on such a cheaply-made appliance. A demand for 10s. 6d., the price of a second hive, in fact, for a simple contrivance like this, is I consider, a mistake which ought to be rectified. I have no knowledge of its working, but in theory it appears to me that several points claimed for it are justifiable. (From latest advertisements I note that the price is now reduced to 7s. 6d.)

Feeding Bees in Dome-Shaped Skeps.—Where these exist as homes for the bees, about the best and simplest methods of feeding them is by "ekeing," *i.e.*, proceed as follows:—Shift the skep to one side. Place an "eke"—of same diameter as the one being fed—on its site. Have a soup-plate or other larger dish ready filled with syrup, with short-cut green rushes floating on top to make rests for the bees. Replace skep above the "eke," and the bees soon carry up the food. On replenishing, have a second dish ready. Withdraw the empty one and lay the full dish in its place, after an assistant has very gently raised the skep just sufficiently far to give room for the operation. These old-fashioned skeps have no opening above large enough for feeding, but the foregoing plan answers very well, if the operation is carried out gently and promptly after bees are abroad from other hives.

Scent in Bees.—A beekeeper over two hundred years ago wrote—"Those who make use of pomatum and other scents, whether of hair powder or any other volatile perfume, would perhaps do well not to make too free with bees." Butler, one hundred years earlier, wrote "Thou must not be unchaste, unclean, smelling of sweat, have a stinking breath, not given to drunkenness, not puffing or blowing, and not acting violently." The first of these requirements is curiously supported by the Koran, wherein we read, "No guilty hand should be allowed to touch a hive." M. Maeterlinck draws attention to the common belief that they "cannot endure the approach of the unchaste," but attributes these antipathies to the fact that "Don Juan uses these perfumes more than does the virtuous man, and hence the rancour of the jealous bees and the legend that avenges virtues as jealous as they." It is a fact that many ancient writers endow these vestal virgins with an instinct capable of detecting and venting their wrath on the unchaste!

An Old Bee Calendar.—January: Turn up your hives and sprinkle them with a little warm sugar and sweet wort. Do it dexterously!

February.—Half open your passages for the bees now, or a little before (if weather invite), but continue to feed weak stocks.

March. By this time your bees *sit*. Keep them close night and morning, if the weather prove unkind

April.—Open your bee-hives, for now they hatch. Look carefully to them, and prepare your hives, etc.

May.—Now set your bees at full liberty; look out often and expect swarms.

June.—Look to your bees for swarms

and casts, and begin to destroy insects with hoops (?), canes, and tempting baits.

July.—Now begin to straiten the entrances of your bees, and help them to kill the drones if you observe too many, setting the new invented glasses of beer mingled with honey to entice the flies, wasps, etc., which want your stores.

August.—Now *rendimiate* and "take" your bees towards the end of this month, unless you see cause, by reason of the weather, or season, to defer it until mid-September; if your stock be very light and weak, begin the earlier.

September.—No longer defer now the taking of your bees, straitening the entrances to such hives as you leave to a small passage, and continuing your hostility against wasps and other robbing insects.

October and November.—Blank.

December.—Now feed your weak stocks. —*Evelyn's Diary*, about 1650.—D. M. M., Banff.

AN IMPROVED BEE-HIVE.

[6132.] In order to get an idea of the appearance of the hive, which, although distinctly new in principle, is not altogether new to these columns, I would refer the gentle reader to pages 201 and 225, where the new hive is described by "D. M. M., Banff," and by the inventor, Mr. Reid, Urray, Ross-shire.

Mr. Reid is a bee-keeper of the old school in the sense that he had reached mature years in pursuit of the craft before the present writer had seen the light of day.

But, while working different types of hives during literally "forty years among the hives," Mr. Reid had ever in view his ideal—an up-to-date hive, easy to manipulate, in which the inmates should be thoroughly under control; in brief, a hive with none of the "sealed book" business about it.

Outwardly, the hive offers a marked contrast to the ordinary bee-dwelling, and the interior arrangements likewise are widely different, for what with celluloid as quilts and as backing to the several tiers of frames and sections, the "mysteries of the hive" stand revealed. The frames used are close ended; this, and the fact of their being two inches shallower than the Standard frame, would alone appear as a distinct innovation to those whose experiences are confined to existing means and methods. Across the Atlantic they fully appreciate the shallow brood-frame, and the Danzenbaker hive with its close-end frames two inches shallower than their Standard is coming to be the general favourite among comb-honey producers.

The stock of bees that gave the best results at the Pan-American Exposition was in a Danzy hive, and worked for the, on this side, much-abused tall sections.

Its advocates, recognising that the shallow brood-frame is insufficient for a good queen, claim to overcome the objection by the use of an additional storey on top previous to the honey-flow, and by contracting to the original brood-nest when supering, the colony is in shape to do the best possible work in the sections.

Mr. Reid works on this principle, and in his hands it has proved to be something more than a theory, as with the extra set of combs all surplus stores are shifted above, the lower frames are left a solid mass of brood, and contraction forces the bees into the sections.

Of course the queen is better able to hold her own in a shallow brood-nest, and this is especially valuable at the heather, and I must admit that the colony I had on these close-end shallow-frames was the only one that gave me any saleable heather sections this season. It might naturally be supposed that the use of these small brood-frames would act as a premium on swarming; but such is by no means the case in Mr. Reid's apiary, and if a stock should swarm the improved catcher promptly puts the closure on attempts at absconding. I will try to explain how the swarm catcher works. Suppose you push up the entrance slides of your "W.B.C." hive and (in imagination of course) cut an opening through the floor-board well back from the entrance, with an alighting-board sloping towards the ground, the bees soon become accustomed to the new entry.

On the approach of the swarming season open up the front entrance and put on the catcher.

If a swarm should come off, the queen of course makes for the light and, finding no other exit, passes through a cone and thence upwards along the hive front to a receptacle provided inside the hive. All this time the lower main entrance is wide open with no obstruction whatever to impede the incoming foragers.

This plan is a distinct advance on anything previous in the swarm-catching line, and practice has shown it to be quite effective, the queen in every case making for the stronger light leading to the catcher in preference to the more subdued light of the main entrance.

Previous to, and after the swarming season, the main entrance only is used. On the other features of the hive, the methods of producing comb-honey of the highest quality, the facilities for nucleiforming, and queen-mating, I need not enlarge, as the inventor himself should best be able to handle the subject, so we must look to him to be no longer backward

in coming forward with a full description of his improved home for the honey-bee.

In conclusion, I may say that I have no pecuniary interest whatever in the invention, and am writing these lines without Mr. Reid's knowledge or consent, as I am anxious that he should no longer hide his light under a bushel, or his hives beneath the trees that grow about Balloan. —J. M. Ellis, Ussie Valley.

INSECTS PESTS IN SECTIONS.

[6133.] Queen Humble Bees.—I write in answer to Mr. Woodley's question in this week's B. B. J. (page 481), to say that the maggot I have observed in cappings of sections is quite distinct from a wax-moth caterpillar, in fact, it is not a moth caterpillar at all, but the maggot of a small fly (*Diptera*). All the maggots I have found are very small—less than 1-16th inch long. I enclose an engraving from a drawing I made of one of them. The tunnels they make are really on the underside of the capping, where they resemble white threads. Under the microscope these threads are seen to consist of minute particles of wax strung together. From the outside of the capping they have merely the appearance of faint cracks, but here and there a tunnel pierces the capping, and particles of wax surround it. The maggots make no web. The pest appears to be very common, and is, I think, increasing. I have received cappings containing its tunnels from many counties in the south of England and last year saw them in some sections from an apiary in this neighbourhood. A photo I took of some infested cappings appeared in the B. B. J., vol. xxxi. (page 203). I should be very much obliged to any readers of the B. B. J. if they could send me some infested cappings in May or June, when the tunnels are beginning to be made in them. I should much like to see Mr. Davidson's 3-16th inch long grub. Possibly it is the larva of another insect.

I take this opoprtunity to thank those who have already kindly responded to my request for queen humble bees, and to say that the latest time for sending them has been extended to December 26. Any notes accompanying specimens sent, saying where they were found, will be greatly appreciated, as I take a great interest in humble-bees, and am anxious to know which species generally hibernate under the earth and which in moss. Several senders mention that they find the queens on slopes (banks or moss-covered roofs), facing north. This is in accordance with my own observations, and is very interesting, as if the instinct of the humble-bee is to choose a place with a northerly aspect for hibernating, the probable reason is that the returning sun shall not warm her domicile enough to wake her up before sufficiently warm weather to start nesting may be expected. Some species remain in their winter quarters until June.—F. W. L. Sladen, Ripple Court Apiary, Dover.

BUYING SWARMS.

[6134.] The dealer, writing on page 486 (6125), knew perfectly well I wanted good swarms, and though I fixed a limit as to time, I did not give him *carte blanche* to forward me any kind of swarms. With a swarm, which, on arrival, did not weigh 2 lb., might I not have expected an explanatory letter expressing regret that it was below the average, and perhaps an offer to accept a lower price? After waiting in vain for a few days, I forwarded him 5s. as a fair price. He reminded me that that was the price of a single queen. Yes, and I know some are worth considerably more. But the swarm sent had not even a good queen in its favour, but an old and feeble creature which could scarcely crawl into the box for the return journey—certainly not worth a shilling. The bees also thought it was time to replace her, as they had started three queen-cells on the frames of brood and eggs I had given them. Having, however, made no stipulation about the queen I was prepared to take my chance. The seller suggested that if not satisfied I should have "returned the swarm at once." Would not that have been high-handed, and, moreover, cruel, if not wasteful (perhaps four consecutive days in confinement)?

I thought if even 5s. were not accepted, the dealer might agree to a reasonable compromise. But I was mistaken; he demanded the full price, and threatened me with the terrors of the law. So nothing remained but to return the swarm, which, alas! perished before they reached their destination. The box in which they travelled was 12 by 9½ by 8½ (inside measure). It had six (not two) one-inch holes in the bottom, which was raised by means of battens from the ground, and an opening 5 in. by 4½ in. at the top, all covered with perforated zinc, so that there was through ventilation. I thought this would do nicely for 2 lb. of bees, as the box which had safely brought me 7 lb. of bees from the south the same week was only about twice as large. Now, whatever might have been the cause of their death —lack of ventilation or food, or from wear and tear—I myself take the full responsibility of the return journey.

But was it too much to expect the supplier of a poor swarm to show some interest, offer some satisfaction, or at least, an explanation? When the dealer who

supplied me heard that I had received only 1 lb. 15 oz. of bees, he did not even express the slightest surprise, nor inform me the weight he forwarded, nor tell me the average weight of the swarms he sent out; but put me off with such generalities—"You know, of course, that bees decrease in weight during a journey"—"I have done my best for you"—"I supplied the swarm on the day you required it." I could only regard them as sugar covering a somewhat bitter pill, to make it more palatable.

I am glad, however, to learn, at last, that 4 lb. of bees were forwarded, and these lost half their weight during the journey! Well, though I have lost the bees, I have some compensation in an interesting problem. Is not this, Messrs. Editors, a record loss, or is 25 per cent. too low an average, and how can it be accounted for? If there were in the 2 lb. 10,000 bees, these must have carried their own weight of food, and in a day and a half (for I received the swarm on the evening of June 23) they must have digested, or rather, evaporated, 2 lb. of honey No, that seems incredible.

But perhaps this was a peculiar strain of bee; if so, the dealer can probably trace other cases of a like nature amongst his customers, and it might be wise to stamp out the bewitched race, before it endangered the credit of dealers and the temper of purchasers.

Now that you have heard both sides, I shall be truly grateful to you, sirs, if you would state the sum to which, in your opinion, the dealer is fairly entitled. — YORKS, December 11.

[The reply on page 478, we think, gives our opinion on the value of the swarm in question.—EDS.]

HIVE ROOFS.

[6135.] The importance of a good sound roof is annually brought forcibly home to us at this time of the year, when everything in the garden is dripping and sodden with the wet, which our winters usually bring. Readers of the B.B.J should be at no loss for devices for securing watertightness for their hives, as numerous methods have been described in its columns from time to time. First we have the metal covering, either sheet zinc, or at considerably less cost thin galvanised iron. The metal may be nailed to the roof, forming an integral part of the structure, but in this case it adds considerably to the weight of the roof, and no doubt tends to make the hive hot in summer. Or the metal covering may be a separate article, to be placed over the roof in winter, advantageously made to project considerably all round, so as to shoot the rain well clear of the sides of the hives (described in B.B.J., February 14, 1901) Then we have what may be described as canvas-and-paint methods, several of which, differing only in details, have been lately described. These all resemble each other in that their waterproof qualities are due to paint. The material which I personally prefer to all others for covering roofs is Willesden waterproof paper. It is very inexpensive, and is quite as effective as sheet metal; it adds practically nothing to the weight of the roof, and does not tend to heat the hive in summer.

At this season of the year, when many are occupying their spare time in building their own hives, it seems opportune to venture a few remarks about the form of the roof. Practically, there are two models in common use, namely, the "ridge" roof, as seen in the usual form of "W.B.C." hive, and the flat-top roof, as in the "Cowan" hive. Whether the former shape is chosen for æsthetic reasons I cannot say, but certainly it appears to be the type most frequently seen in use; and yet, for several good reasons, I consider the flat-top roof superior.

In the first place, a flat roof is easier to make, and is more easily made watertight. A piece of 9 in. board sawn diagonally, so that the two halves measure 6 in. at one end and 3 in. at the other, will give the two side pieces of a convenient pitch; while a second piece of similar board will cut into a 3 in. and 6 in. strip for the back and front respectively. The top boards should project well over all round, not less than 3 in., the whole being covered with a single piece of "Willesden" paper, folded over the edges and tucked underneath, and then painted as usual. Such a roof is absolutely proof against the worst weather. Flat roofs serve as most convenient tables when one is at work in the apiary, and, personally, I find this a great comfort.

There is still another most useful purpose to which a flat roof may be put, and that is as a board upon which to throw the bees when hiving a swarm, or joining two lots into one. Placed upon the ground front end facing the hive, it stands about level with the alighting-board, or may be readily brought level with it by means of a block of wood or piece of brick.—G. S. NEWTH, Godstone, Surrey.

("*Correspondence*" *continued on page* 496.)

HOMES OF THE HONEY BEE.

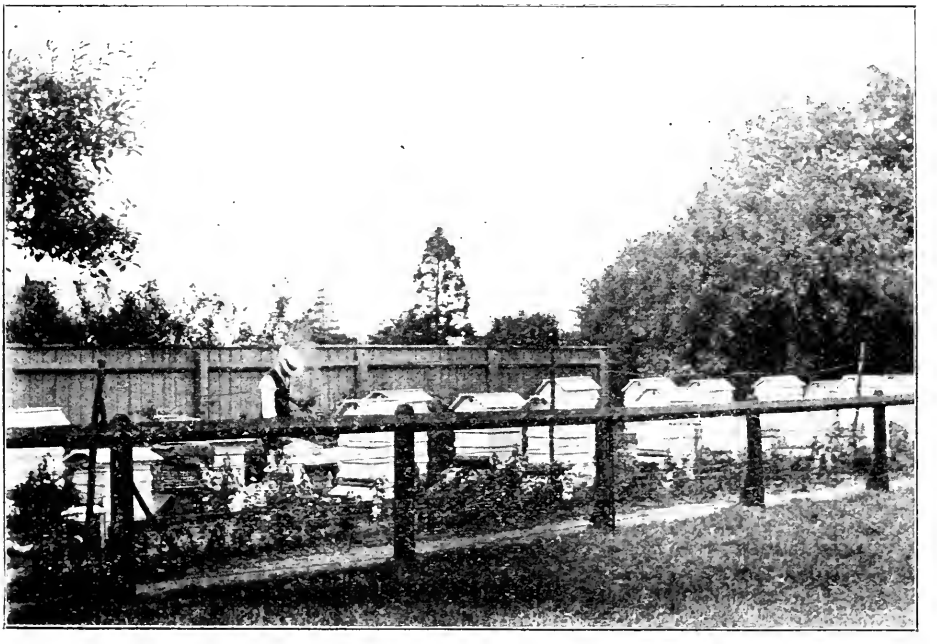
THE APIARIES OF OUR READERS.

Mr. Burgess is another bee keeping gardener, one of those whose love for bees tends to popularise the pursuit among a class to whom our craft is indebted in many ways. There are few delicacies brought in from the garden more highly

appreciated in many families than a dish of new honey, fragrant from the hive, and we trust gardeners will read the following "notes" and profit thereby.

"In reply to your request for a few 'Notes' concerning my bee-experiences, I would first say my activity began in boyhood, having more than once helped in placing our home skeps over the sulphur-pit; but that item of bee-work is now a thing of the past with me. The apiary seen in photo was started five years ago, and I hope to successfully move the hives in the coming new year to a new location, it being my intention to go into bee-keeping on a larger scale. Most of the hives were made by myself in the moved from the hives, and I regard bee-keeping more as part of my 'work,' my hobbies being incubators and poultry-rearing. In my work as a gardener the bees are helpmates, for they assist very much in fertilisation. I have no difficulty in the early spring if we have a few bright warm days, in getting blooms in the fruit-houses fertilised by the bees, and this is better than going over the blossom with a camel-hair brush, which every gardener knows has to be done with early fruit bloom.

"All this may read well to one who contemplates starting an outdoor occupation, but there is another side which I often think about when I read the letters of your correspondents asking such questions



MR. G. C. BURGESS' APIARY, HOCKERILL, BISHOPS STORTFORD, HERTS.

winter evenings, all being made to take the Standard frame, but the holding capacity varies from nine to twelve frames in each hive. The larger hives are worked for extracted honey, the small ones for sections only. The hives shown do not include all my stocks, some being located in another fruit-garden, but the one seen has secured for me the first prize from our county Association for the "Best-kept Apiary" each year since the prize has been offered for competition.

"Another thing I am rather proud of is having been successful in obtaining this year the third-class expert's certificate of the B.B.K.A. I do very little exhibiting on the show-bench, one reason being that my honey is sold soon after being re-

as, 'How much can I make per year out of bees?' It is easy enough to show how a good living can be made on paper, but that does not always come out in practice, unless you are willing to work sixteen hours a day in the busy season, and keep on pegging away steadily the rest of the year. My experience is that in bee-keeping, as in gardening, there is always a job wants doing; anyway, that is how I find it.

"The main thing to bear in mind should be forethought and looking ahead. He must also be methodical in all his work, and adopt the motto of 'A place for everything and everything in its place.' Procure a 'Guide Book,' follow directions closely and carefully, and your bee-operations will be successful. In saying this

I merely place on record my own experience.

"I also have Mr. Cowan's book on 'The Honey-Bee,' and the handbook for cottagers, 'Modern Bee-keeping,' besides taking both the B.B.J. and the *Record*. With regard to my sales of honey and prices obtainable for same, they are not high in this part of Herts, where one has to compete with bee-keepers who carry round their comb-honey to people's doors and offer it as low as sixpence per 1-lb. section. I generally buy out such honey-sellers if the quality is good enough, for, as a rule, their stock is not large. But I have to clean up such sections and make them fit for marketing or for table-use. I always manage to sell my season's harvest before the year ends. This year's crop has already gone, along with a good deal that I bought in the way mentioned above. It is perfectly certain that sales can be considerably increased by studying our customers, and offering only honey of good quality, neatly got up and made to look clean, toothsome, and nice on the table. My own sections are always wrapped in the waxed paper used for butter, etc., and placed in neat cardboard envelopes. All these items, however, cost money, but I find that 'small profits and quick returns' are best in honey-selling.

"I conclude by heartily wishing our Editors and all brother bee-keepers the compliments of the season and a good honey-crop in 1906."

CORRESPONDENCE.

(*Continued from page* 494.)

HIGH RATES AND OWNERS' RISK.

A RAILWAY MAN'S VIEW.

[6136.] I hope, Messrs. Editors, that you will allow me space for a few words in our JOURNAL on the above subject, in reply to Mr. Woodley's "note" on page 481 last week. I think our friend looks only at the bee-keeper's side of the question, which is hardly fair. First, let us take the rates. Are they high? I, for one, do not think so, but perhaps my view is prejudiced because of being a railway man myself; but, as a bee-man also, I cannot think the charges are too high. I am employed at a station 209½ miles from London, and have taken the trouble to look up the rates to London for honey. Comb-honey is carried at 53s. 8d. per ton — that is, roughly. Thus, a commodity worth from £65 to £84 per ton is carried 209½ miles for about 65s. to 70s. Seeing that the boxes in which sections are packed would add considerably to the weight, small quantities of three cwt. and less are slightly dearer; but it cannot be said that these charges are high. Honey in bulk is carried the same distance for 44s. 8d. per ton, and as packages would not weigh so much as section-boxes, the rates are much cheaper, in addition to being carried at company's risk. Comb-honey rates are necessarily higher than honey in bulk, because the railway company knows well (and Mr. Woodley knows much better) its almost infinite frailty and the careful handling required, because of its great liability to break down with the least rough jar, which cannot be avoided in shunting a merchandise train, however careful that may be done. As a matter of fact, "shunting" is an operation which it is impossible to carry out with such care as is required to carry comb-honey in perfect safety. I do not think there can be any doubt that comb-honey is carried much more safely by passenger train, and these rates are as follows:—48 lb., 30 miles, 6d.; 24 lb., 50 miles, 6d.; 100 miles, 9d.; 200 miles, 1s.; any distance over 200 miles, 1s. 3d. Surely Mr. Woodley cannot call these charges high. But the above charges include delivery to residence of consignee, providing the distance is within the company's usual limit for free delivery. Not only so, but I have no doubt that if Mr. Woodley would guarantee a regular traffic from his station to another these rates would be reduced a little further. The rates per passenger train are only one-half the ordinary parcels rates.

With regard to the conditions under which comb-honey is carried at owner's risk, they are quite simple and easily understood, being as follows:—When the consignor sends honey at "O. R.," he signs a consignment note relieving the company from all liability for loss, damage, misdelivery, delay, or detention, except upon proof that such loss, damage, etc., arose from wilful misconduct on the part of the company's servants (comb-honey is only accepted at "O. R." in all cases. Mr. Woodley's assertions about the gross carelessness of the railway porters who break nearly everything they handle are, to put it mildly, misleading and not true. In many instances where breakages occur the fault lies as often in bad packing and insufficiently clear labels stating "contents" to be comb-honey, as it does with the railway porter. Mr. Woodley's plea about his "greatest injustice" will not hold water. I say he is *not* "charged at the highest rate" for his comb-honey, and he has redress if he will prove that his loss is caused by wilful and gross carelessness of porters, even if his comb-honey is carried at owner's risk. My experience for the last sixteen years, as a servant of the G.W. Railway, has been that the company are always willing to meet their customers and consider legitimate and bonâ fide claims upon proof, etc., etc.

In conclusion, let me say I am a signalman on the G.W. Railway, and during the last four years have taken a great interest in bee-keeping as a hobby. I was more than pleased the other day when I saw in the B.B.J. that I had secured the 3rd-class expert's certificate of the B.B.K.A., nor shall I rest content until I have had a try for the 2nd-class certificate. This is my first effort as a contributor to your columns, and I hope you will think it possesses sufficient interest to insert a part, if not all, of my letter.—J. Huxley, Flintshire.

FORMALIN AND FOUL BROOD.

BEE-KEEPING AS AN OCCUPATION.

[6137.] Referring to Mr. Stapleton's letter on page 486 last week, and your footnote thereto, respecting formalin as a cure for foul brood, I should be glad if you could inform me where formalin may be procured, for if spraying the floor-board with the solution will cure foul brood, this seems to me to be the simplest method I have seen described, and I would like to give it a trial next season if I have the opportunity, for though I have not foul brood myself some of my neighbours are less lucky. Would simply raising the roof be sufficient ventilation and to prevent the bees asphyxiating, or would it be necessary to remove nearly all the quilts? As regards bee-keeping as a livelihood, my experience goes to prove that though a very good thing as an adjunct to other business, it is hardly to be depended on as a sole occupation, unless all the various branches of the profession be taken up—such as, queen-rearing, selling swarms, stocks, etc., and dealing in appliances be added to it. My profits this year work out at about 11s. per hive; in 1903 the expenses exceeded the income. The average "take" of honey in this neighbourhood is about 30 lb. per hive, the honey-flow only lasting six weeks in good seasons. If I could make the price of my honey that some of your correspondents manage to, I should nearly double my profits.

As regards damage to sections by the minute borings of an insect pest, I first noticed in some sections I took last year from a hive near Abingdon, some of these sections were completely net-worked under the cappings. I have noticed it in several apiaries in this neighbourhood (Witney) this season, but have never had any so disfigured myself. All the damaged sections were gathered from sainfoin. Whether it is always the case, or whether the whiter cappings of clover sections do not show the tunnellings, I have not had sufficient opportunity to observe. Name sent for reference.—Mid Oxon, December 11.

[Any chemist of repute will supply you with formalin, but it must be borne in mind that it is a very powerful germicide and needs most careful handling. All quilts must be removed, a single layer of very open material laid above the frames to confine the bees. The roof would also need raising to allow the gas to escape, or the bees would certainly be asphyxiated. —Eds.]

BEE-KEEPING.

HOW TO ACHIEVE SUCCESS.

The mention by Mr. Harborne, on page 475 of our issue for November 30, of an article by Mr. H. W. Brice, entitled "How to Achieve Success in Bee-keeping," has brought us quite a number of requests for a copy of B.B.J. for February 3, 1898, as containing the article in question. It so happens, however, that Mr. Brice's paper is a lengthy one, occupying space in four or five issues. Unfortunately, also, we have not a full supply of back numbers, and as the subject is arousing much interest just now, we have decided to adopt the suggestion made by a correspondent, who, dating from "Bendon Park, Belfast," says: —"I notice in the 'Homes of the Honey Bee,' in B.B.J. of November 30, a reference to Mr. H. W. Brice's 'How to Achieve Success in Bee-keeping,' and I am induced to ask if you see the propriety of reprinting that article just now, in view of the statement made on page 471, and in the interests of later readers.

The first portion of Mr. Brice's paper appears below and will be continued next week.—[Eds.]

It is very common to hear some one say: "Oh, I am going to do so-and-so." Then, without further ado, straightway set about the business, whatever it may be. They never think of weighing the pros and cons in connection with the subject with which it is proposed to deal. One is "going in" for poultry; another intends to start some phase of gardening as a special pursuit, tomato growing, for instance, is a favourite notion. Not long ago carnation culture became almost a mania with many well intentioned enthusiasts imbued with these various rural pastimes or hobbies. Looking back, and remembering the number I can call to mind who have tried various schemes having for their object the attainment of surplus wealth, the question is forced on one's mind: where are they now? Where are the fortunes sure to be made from the new methods hitherto hidden in obscurity, and which were to fill the pockets of the fortunate discoverers? Where! I know not; but it is very plain that the majority began at the wrong end. They began business first, and then found out how small was their knowledge of the trade in which they had embarked. It is one thing to keep a few fowls in our house garden, or to grow

a few plants especially well in our miniature greenhouse, but it is an entirely different concern when these matters are taken in hand on a larger scale, for the express purposes of profit and profit only. Then the burden of the work is *felt*, and must be charged for as labour; and thus the pleasure goes, while profit is tardy in putting in an appearance. Eventually the thing is thrown up because "it doesn't pay." Fortunately, the subject of bee-keeping, with which I propose briefly to deal, is—thanks to the nature of the pursuit, and to the sound, cheap bee literature, technical and practical, which is available to all—on a somewhat different footing; but the idea that a fortune can be made by keeping bees is a thing of the past. On the other hand, it has been clearly proved that—taking an average of years, and carried on in a suitable district—bee-keeping is a sound, profitable, and health-giving vocation. Of course, to be successful, it must be pursued intelligently and with proper care and attention, just as every other outdoor pursuit; but on its merits alone apiculture bids fair to become one of the most popular of our minor rural industries. Hundreds are joining our ranks annually. Some will, no doubt, fail, for the reasons above-mentioned, just as others will succeed; and the latter will do so by working on proper lines, and not attempting or expecting too much.

Adaptability for Bee-keeping.—This is a point for serious consideration. Some, for reasons difficult to define, are better adapted to the work of managing bees than others, and natural aptness for handling insects—which to many are but a source of dread from their stings—is more than half the battle; but there are few who are willing to give their energies to making a trial that cannot well take up the matter with advantage. The first essential to success, then, is the study of one or two good works on the subject; and having mastered the important details as far as possible, it will be found that some things therein will to most still require the elucidation which can only come from either ocular demonstration or experience. If there is a bee-man of repute in his neighbourhood, the beginner should endeavour to get an interview and explain his doubts and difficulties. It is surprising how easily what are to him riddles may be solved. If, however, there is no such friend available, the next resource is the query column. Write to the BEE JOURNAL, or beginners' column in *Record*. Lay your troubles before the Editors, who will give all the help in their power, I know. Having by this means cleared the ground, so to speak, it is then time to think of putting the knowledge gained into practice. Beginners with bees should never ignore the old adage, "Make Haste Slowly." Buy one, or preferably two, colonies of bees; don't take more than two, be they ever so cheap, while the disadvantage of beginning with a single stock is risk of accident to it and loss of valuable time in consequence. With two hives, however, everything that is useful in practice may be done. Be content to accept the facts as stated in your text-book until you are able to prove conclusively that they are otherwise. Do not commence out of season, or failure will probably follow; April I consider the best month to begin, just when the fruit trees are breaking into bloom, and the spring flowers are at their best. Honey is gathered in varying degrees then, and pollen the life of the young larvæ, is abundant. Bees moved in April seldom take any harm, while the change to a fresh district is often most beneficial. Bees also travel well then, and should any unfortunate mishap to the queen occur, another can be raised by the bees themselves without serious loss; while at some seasons loss of the queen means ruin to the stock.

What Kind of Bees to Keep.—This is the next point for consideration. Some prefer our native bees, others hanker after foreign races, while a third go in for hybrids. After keeping nearly all sorts my own predilection is for the latter. No pure-bred bee—in my opinion—equals for all round good qualities a first-cross between our native brown bee and the Ligurian or Italian variety. Carniolans though good-tempered and quiet to handle, are excessive swarmers. The Ligurian, when pure, is also easy to manipulate, but most other foreign races of bees are of bad or uncertain temper, and should not be tolerated when we have a superior article at home. British or native bees are hard to beat in many respects, though when crossed with the Carniolan they develop the troublesome habit of excessive swarming. This undesirable quality is much reduced when our natives are crossed with the Ligurian.

Buying bees requires some care; on no account purchase stocks in frames unless they are guaranteed in writing to be healthy. If this is done, and the bees turn out diseased, a remedy is to hand; but my advice is, buy no second-hand hives. New ones can be bought at a cheap rate, and no risk is run. Swarms are safe to purchase, and give a good return the first season if early and of good size—say, from 5lb. to 7lb. in weight.

Handling Bees.—It is safe to say that hardly any two bee-keepers handle bees exactly alike. Nor is it less true that, while a few easily attain a considerable amount of skill in this branch of bee-keeping, not a few fail entirely to manipulate their bees with comfort to themselves, to say nothing

of doing all such work neatly and thoroughly. Yet, if it was realised by those who strive to become successful with bees how much depends upon the attainment of these points it is certain that more thought would be given to this phase of the matter. Many make a start with so little of aptitude for bee-handling as to think that it is only necessary to smoke down the bees almost to the verge of suffocation, dismantle the hive, tear aside the quilt, pull the bees and frames about, put them back again anyhow, and close the hive down again with a bang! and if they escape being stung during the process, conclude that it is evidence of their skill in handling. Some who should know better go about their work so roughly and cruelly, so far as bee-life, as to make such handling almost unbearable for any one who thinks of the poor bees having life and feeling. I have seen a whole apiary of fourteen hives thoroughly disorganised for days by the injudicious treatment of one colony. So far as subduing bees, it is less the quantity of smoke used than the quiet, firm way in which the frames of combs and bees are manipulated; rough handling leads to stings as a rule. First give a couple of puffs of smoke at the entrance to drive in the guards, then remove the roofs, lifts, and other appurtenances, till the hive-top is clear of extraneous coverings, raise the quilt at one corner and puff a little smoke along the frame ends from one side of the hive to the other, raising and lowering the quilt as the smoker is gently carried along; and then leave the bees a moment or two to "feed," as they always do when alarmed by smoke. Here is where many fail; they think that an abundance of smoke is all that is required, entirely forgetting that the real purpose in smoking bees is not solely to alarm them but only to use the intimidant in just sufficient quantity to induce the bees to fill themselves with honey; and for this a little time should be allowed. Next proceed to carry out the object in view, going to work deliberately, quietly, and with as little excitement or hurry, as if going to spend an hour in quiet reading. In other words, first making yourself quite comfortable with regard to position for removing frames (I generally carry with me a light empty box of a convenient height to sit upon), then carefully remove frame by frame and read the story of the hive off, as leaf after leaf tells the interesting tale of the industry within. Never entirely remove quilts from all frames; uncover part thereof at a time, and, when the first few have been examined, cover them over again. This saves chilling brood, and keeps the bees quiet and well under control at the same time.

It is not advisable to handle bees without some protection for the face; therefore, always wear a veil, but do not—if they can possibly be avoided—wear gloves they irritate the bees and cause much mortality among them that would otherwise be spared.

The best time for carrying out bee manipulation is about noon on a fine, warm day. The workers are then usually absent from the hive, and when returning laden are less likely to trouble the manipulator, their chief mission being to get rid of their load and to be off again for a fresh cargo. Never manipulate a stock from the front of a hive; stand at the back or side thereof, according to the position in which the frames hang.

The temper of the bees can be readily judged on first opening a hive, and the desirability of continuing operations estimated almost exactly. If the bees seem to bubble up over the frames with a sharp, resentful "whiz," go no further. Quietly close the hive, and try them again in an hour or two, or better, next day. If, however, they remain quiet, proceed, carefully parting and removing the frames out: and when the object of the operations is attained, replace the frames in their old and proper position, always taking care that the queen is safely within the hive and uninjured.

In examining frames, handle them in the proper orthodox way; if this be not attended to, and the weather is at all warm at the time, the probability is that the bees, comb, and its contents will part company with the frame and fall out, causing a state of matters not easily remedied. Do not keep the frames out of the hive longer than is absolutely necessary, and never attempt to manipulate bees at unseasonable times, such as when low temperatures prevail, or too early in the spring or late in the autumn.

Building up Stocks in Spring.—An important factor in securing ultimate success is making an early start with the bees in spring. Therefore, as soon as the weather is sufficiently warm and settled for bee-operations, work must be commenced. On the other hand, it is sometimes necessary to restrain the enthusiasm of beginners when a new season opens, in order engaging in premature operations, which are frequently productive of much harm. Everything should be done as early as possible to help the bees forward while taking every care to ensure that what is intended for the good of the colony does not eventuate in disaster. In writing this I have two—often much abused—bee operations in mind, viz., "Stimulative feeding in inclement weather, and spreadng brood in spring." Regarding the first, no good can result from stimulating brood-rearing until the weather is so settled and warm that the bees are flying almost daily, and

bringing in pollen plentifully. Far better allow breeding to go on steadily if somewhat slowly, during the first ten or twelve weeks of the year; by this time Nature has waked up, early flowers are appearing in ever-increasing quantity, and bees are then ready to accept the inducement to greater activity thus offered. In giving syrup food for the purpose of stimulating breeding at an increased rate, bear in mind the food is not intended to be stored in quantity. Therefore, the supply should be limited to, say, for a strong stock, half a pint each second evening, and for weak stocks half the quantity, giving the food so slowly as to occupy the bees almost the whole time in carrying it down. Syrup for this purpose should be rather thin, and given warm. If given in greater quantities than mentioned, the end is defeated, because the food is stored, and cells are occupied with it which should be reserved for brood-rearing, thus throwing the bees back instead of helping them forward.

(Continued next week.)

Queries and Replies.

[3977.] *Foul Brood and Disinfection.*—I had a case of foul brood this year, but think I have got rid of it, and by way of using preventives I would like to know: 1. Will burning sulphur disinfect my bee-shed? 2. How can I sterilise my beeswax before using it to fix foundation? 3 Which is best, soluble phenyle or naphthol beta for mixing with the syrup? 4. Does increasing the quantity of naphthol beta do away with its curative properties? I have medicated all my bee-food, but am anxious to take all possible precautions against a recurrence next year. I enclose name and address, and thank you in anticipation. — NOVICE, Yorks, December 11.

REPLY.—1. Burning sulphur will do no good whatever with regard to removing foul-brood germs from your bee-house, if it contain such. 2. You may sterilise wax used for fixing foundation quite sufficiently by boiling for half an hour. 3. Naphthol beta. 4. To use naphthol beta effectively for the purpose intended, there must be no departure from the directions given in the "Guide Book," which are in strict accordance with the views of the distinguished scientist to whom its merits, as a remedy for foul brood, are due.

[3978.] *Transferring to Standard Frames.*—I shall be much obliged to you for advice on the following details. I am about making a hive on the "Cowan" principle, and transferring, in the spring, a stock at present hived on irregular combs, and not on Standard frames, and running across the entrance, and so I ask:—1. Will it do to transfer to hive with frames running at right angles to entrance. 2. Do you think this method better than running across? 3. Can I safely transfer and introduce Standard frames and foundation as soon as queen starts laying, say, about March, weather conditions being suitable? 4. Is $\frac{1}{4}$ in. bee-space correct at each end of frame, making $14\frac{1}{2}$ in. inside measurement and $\frac{1}{2}$ in. bee-space between bottom of frame and floor-board?—BEE-HIVE, Birmingham.

REPLY.—1. The way frames hang in the hive makes no difference at all so far as transferring is concerned. 2. Yes, otherwise we would not advocate it; not only so, but nearly all leading authorities in this country and elsewhere are in agreement on this point. 3. If the frames now occupied by bees are not standard size, obviously they will not interchange with the "Standard" unless the combs are cut out from the old frames and tied into the latter. 4. Yes, quite correct.

Notices to Correspondents & Inquirers.

J. E. L. (Haddingtonshire). — Stopping Robbing.—We never heard of "Overton's Disinfecting Powder," or of its efficacy in stopping robbing by bees till it was mentioned in our issue of August 24 last. We have sent on the address of the correspondent whose letter is referred to, and, if the remedy is successful in your case, we will be glad to make the remedy known for the benefit of readers generally.

A. TALL (Cambs).—Honey Not Granulating. — There is nothing abnormal in honey remaining liquid till the end of season. We have frequently had good honey in liquid condition for twelve months.

Honey Sample.

A. O. (Berks). — Sample is only fair in quality, being rough and hard in grain. We have seen better samples offered at 50s. per cwt.

Suspected Comb.

H. D. W. (Mont.).—We find no foul brood in comb sent, but it has been so damaged by the "robber" wasps mentioned as to be unfit for use. All such combs we should melt down for wax and replace with full sheets of foundation.

BEGINNER (Durham). — Comb contains nothing worse than half-filled cells of pollen which have been covered with honey by the bees. The wet, sticky appearance of pollen is due to the honey with which it has been covered before the bees used it as food. Your other queries need no reply, since comb is free from disease.

Editorial, Notices, &c.

THE MILAN INTERNATIONAL EXHIBITION, 1906.

An International Exhibition, the first of the kind ever held in Italy, will take place in Milan, and will be open from the 15th April to 15th November, 1906. Every department of manufactures, arts, and sciences, is to be fully represented, and the exhibits are distributed over 1,186 classes. In the Agricultural Section, Class XI. is devoted to bee-culture, and this class is divided into three groups, viz., first group, Hives and apiaries in general; second group, Workers, partition sheets of wax, etc.; third group, Centrifugal machines for the extraction of honey, machines and knives for surface removing, Utensils for removing the wax. Accessories. The exhibition will be held to celebrate the opening of the Simplon Tunnel and will, no doubt, create general interest owing to Italy's financially improved and improving condition, and also to the fact that it is the first international exhibiton ever held in Italy. The arrangement of the exhibition is by groups and classes of an international character, so that all products of a similar nature, irrespective of the country of origin, are placed side by side, so that an easy comparison of their merits can be made.

The British section is in the hands of the British Commission, and full particulars as to space, etc., can be had by applying to Arthur Serena, hon. Executive Commissioner, 1 and 2, Oxford Court, Cannon Street, London, E.C.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[6138.] And so we have reached the shortest day in the year. To-morrow we start on the lightening process of time; every day will be longer, and our hopes will revive also. We shall be leaving the dull, dark days behind, and yearning for the good time coming. For the next fortnight, however, the many will be full of enthusiasm over Christmas and the New Year. These dual festivals remind us of the brotherhood of man, when hand clasps hand among fellows and we exchange good wishes and the usual compliments, while the bells and the carol-singers renew the angelic song of "Peace and goodwill towards men."

Buying Swarms.—As our readers know, this is a perennial subject. Some bee-keepers—or would-be bee-keepers—think that swarms can be sent off on a stated day and by a named train, much as a grocer would send a parcel of currants, and if the season works out for the completion of the order there are two happy bee-men; but, should the sun shine on the hopeful purchaser and the rain and a cold wave assert itself itself over the seller's district, the man in the sunshine is apt to "call names" about the lax business ways and dealings of the purveyor. But who is to blame? In the years that are behind I have endeavoured to send orders promptly, as desired, but bought experience has proven that if a man is just to himself as well as his neighbour he cannot always fill orders with "shook swarms." Therefore, I, for one, after spoiling some really good stocks for the season, decided never to do so again. It did £1 worth of damage to the stock in order to supply a 10s. 6d. or 12s. 6d. swarm. Besides, the "shook" swarm is never, in my opinion, equal to a natural swarm. Every season I do my best to have stocks in the best of condition for swarming, and all swarms sent out are "natural" swarms, and I believe if these only were purchased by beginners and put into new hives that we should hear far less of foul brood.

Railway Rates.—The Great Western Railway has found a champion in Mr. Huxley (6136, page 496). In the first place he states that, in his view, charges are low; but as a bee-keeper, he must know there are few ton lots, neither is there a large number of 3 cwt. lots of honey sent by rail. Our industry is small and the consignments tally with our out put. What we bee-keepers (and only the larger bee-keepers) grumble at about railway rates is being charged in Class 4, and in this way having to bear the loss of damage to our goods, with no redress. Our friend J. H. knows no one can localise the wilful misconduct of the porter, so it is waste of room to discuss this point; but as regards "packing," I flatter myself I can manage that work as well as most folks. I have had forty-five years' experience in that line of business, and have sent honey as far as India and South Africa without a breakage. My reason for saying that porters break nearly everything they handle was a personal one. I recently bought a piano in London as a

wedding present for my daughter. It came to hand damaged (all the music knocked out of it). That had to go back. Then a marble chimney-piece from Birmingham came to station broken. This I refused. Then a crate of honey jars—three dozen at one corner broken. Claimed for. Next week followed a fire-grate to station broken. Refused. Week before last new iron bedstead and suite of furniture broken. Claimed damage. And a case of honey sent to Guildford, and, after going in various wrong directions, it reached Guildford, where it landed with one-third of the sections damaged. For this I get no redress. I contend that it should go at rate 1 or 2 at most, instead of rate 4, if we are to bear all risks. I have seen my own exhibits of honey from a West of England show (on one occasion at an important function) thrown on to the gravelled platform with a force which sent the gravel flying, and the porter sung very small when I remonstrated with him for his careless handling of my property, and that I should claim compensation if I found the contents damaged. I always attach my "Don't jar" labels with large letters in red on a white ground, so there can be no complaint on that head. I could add more on this subject, but have said enough, I think.—W. WOODLEY, Beedon, Newbury.

HEATHER HONEY AND ITS BLENDS.

[6139.] I was much interested in Col. Walker's letter (page 482) in "British Bee Journal" of December 7, where he refers to heather honey blends. Is it possible, do you think, for judges when awarding prizes in the medium-coloured honey classes, to mistake a slight flavour of hawthorn for that of heather? I am prompted to ask this by the editorial remarks on page 414 with regard to the medium class at the late Dairy Show, and Col. Walker's letter made me think of it, for he speaks of the different flavours of heather honey and their various blends. I am not complaining in the least about the judging at the Dairy Show. In fact, I am too old an exhibitor for that; but I staged an exhibit of honey in the "medium" class at that show the exact shade of grading-glass. The consistency was excellent, and it had a slight flavour of hawthorn, and I have no doubt it was a mixture of clover and hawthorn. However, it did not receive any notice from the judges, and the remarks on page 414 of the "British Bee Journal" about this class and their admixture of heather honey makes me think it may be possible that the judges mistook the hawthorn flavour for that of heather. But it is impossible for my bees to get heather honey, there being none growing nearer than twenty miles, and very little of it there. We get a large quantity of hawthorn honey in this district at times; the hedges are tall and usually covered with blossoms, so that if the weather is suitable the bees work freely on it to a large extent. I have frequently remarked, when walking around my apiary in the evening when the hawthorn is in bloom, that "it smells like a hawthorn bush"! The honey from hawthorn is dark and strong in flavour, but when mixed by bees with other honey it is not at all disagreeable. I have sold the honey I had at the Dairy Show, or would send on a sample for your inspection. Name enclosed for reference.—"EXHIBITOR," Lincs., December 12.

[We are glad our correspondent, in drawing attention to the above, has referred to the late Dairy Show, because it affords us the opportunity of assuring him that so far as regards the judges in question, one, at least, is perfectly well acquainted with the flavour distinguishing a blend of hawthorn with that of other honey, and estimates very highly the "blend" alluded to if not too strongly marked. It is well known to many experienced judges that honey entirely from hawthorn is too dark in colour and too rank in flavour for table use, but a slight blend of hawthorn gives a delicious flavour and "character" to honeys from several other sources, and has not seldom turned the scale in a close competition where we have officiated as judge.—EDS.]

A RE-START WITH BEES.

[6140.] Referring to my letter in your issue of October 5, (6045, page 396), and the kind answer of your correspondent, "M. E. A." (6056, page 406), in that of the following week, I fear that I am guilty of some discourtesy in not answering. May I say that if "M. E. A." will communicate with me at the address below, I shall be pleased to hear from him. As I hope to be in Colwyn Bay for a week just after Christmas, we may meet.

May I thank you for your answer to my queries, and say that by means of the JOURNAL, I have been able to approach a few bee-keepers, somewhere in the Denbighshire district, and that I have had very kindly and helpful letters from them.

I am sorry to find that there is no Bee Association in Denbighshire. Will it be too much to ask bee-keepers in the county to communicate with me, through your columns (I am too busy a man to undertake a large private correspondence), and say whether they are willing to join in the formation of one. I was for some years a vice-president of the Lancashire and Cheshire B. K. A., and, on its division, of

the Lancashire Association, and I know what value an association is in a county. On the mere selfish ground of protection from disease, the visits of an expert to ill-kept apiaries and the care taken to eradicate foul-brood, justify the existence of an association. The help it gives to poorer bee-keepers, is beyond calculation. —THOMAS PRICE, LL.B., Sandiway, Demesne Road, Manchester, December 15.

HONEY SAMPLES FOR NEW ZEALAND.

[6141.] In compliance with the desire of the New Zealand Government Bee Expert I have procured for him samples of our best representative prize honeys. To complete the collection some genuine Scottish heather honey is indispensable, and here I have not so far been successful. Will any bee-keeper from the North help me by writing to say he will send me a 1 lb. bottle, for which I am empowered to pay anything reasonable? The honey need not have won a prize if of first-rate quality. The collection will be placed finally in the Agricultural Museum, at Wellington, N.Z., and each bottle will bear a label showing where and by whom the honey was gathered, from what sources, etc.—H. J. O. WALKER (Lieut.-Colonel, Leeford, Budleigh Salterton, December 18.

BUYING SWARMS.

[6142.] One would think that a person in the position of your correspondent "Yorks" (6134, page 493), if he is the individual I had in mind when writing my letter—on page 486—would stick to facts. If the queen was "an old and feeble creature," why was no mention made of it before June 30? (swarm supplied 22nd). And then she was found "feeble" when "crawling into the box for the return journey." How was it she was not seen to be feeble when run-in as received with the bees? And this after a journey of over 200 miles! As to the threatened terrors of the law, not one word in reference to law was made or mentioned until I had waited from July 15 to October 26; without a letter months after the 5s. was returned.

I am not a clergyman, and have something better to do with my time than in a quibble over an ounce or two of bees occupying two columns of your valuable space. I simply say that the weight of box and bees when they left me was 16 lb., as per signed statement from railway company, which I hold. What became of the difference I know not; but this I do know, that my dealings and character will bear investigation, as the numerous unsolicited testimonials in my possession, extending over nine years will show. Having given me a second chance to answer my customer through your columns, and given the true facts, I trust this will put other traders on their guard.—SURREY, December 18.

[We hope the correspondence on above will now be allowed to drop.—EDS.]

MAKING SOFT BEE CANDY.

BR. COLOMBAN'S RECIPE.

[6143.] Enclosed please fine samples (2) of soft bee candy made from the recipe given by Br. Colomban on page 363 of your valuable journal, which I have taken in for a few years, and read with great pleasure and profit. Before enumerating my experience in making this candy, I shall be pleased to have your opinion on same, when I will explain my experience in making. The two samples, as will be seen from difference of colour, etc., were made at different times. But as regards the recipe itself, I am sure there could be no better found, nor one more simple to carry out when the details are properly understood. I therefore tender my best wishes and thanks to Br. Colomban for his excellent recipe. I send name and address, but sign myself "SCOTIA," Berks, December 13.

[Though both samples are good, No. 1 is by far the best, being more smooth in grain and likely to retain its "buttery" softness for a much longer time than No. 2. The colour of the latter sample suggests its being made from a yellow sugar. We shall be glad to have your promised "experiences" in candy-making.—EDS.]

A NOTE FROM SOUTH AFRICA.

ORANGES, CARROTS, AND BEES.

[6144.] Referring to the letter of "Q. Y., Natal," in which mention of "oranges and carrots upsetting bees" is made (see B.B.J. of September 28, page 384), I have never seen anything of such schoolboy pranks as he alludes to, but some of my friends have. One man on the mine where I work told me that he had kept bees in these parts, and while doing so heard that carrots upset them, and in order to test the truth of the statement he placed a carrot directly in front of the hive, about 18 in. to 2 ft. from the entrance, and had the pleasure of paying for some of his neighbours' fowls the next day. In consequence, he has determined never to let his bees see carrots again. Orange peel I cannot answer for, having never heard anything against it.—L. S. PALMER, Johannesburg, November 23.

BUYING AND SELLING HONEY.

[6145.] May I point out to your correspondent, "Anti-Honey Grabber" (6110, page 467), that if he had troubled to read my letter on page 427 carefully, he would find that the middleman whom he so much despises does not make 90 per cent. of profit. In my case 2d. per lb. is the highest profit I have ever got. I have never bought honey-jars at 1d. or seen them advertised at that price. Mine cost me 2¼d., and, in addition, I am at a loss through all breakages, and have to pay carriage on same. If "Anti-Honey-Grabber" was not ashamed to give his name, he might have been more fair in his criticisms.

Since my letter of October 26 was written I have purchased 700 lb. of honey at 5d., and have been offered 2,000 lb. at the same price. Comment is needless.—E. WHITFIELD, Alresford, Hants.

THE PAST BEE SEASON IN OXON.

SELLING HONEY.

[6146.] The past season has been disappointing in the Chipping Norton district. It commenced well, and stocks were fairly strong, but the continuous spells of wet and cold weather prevented bees from working on the sainfoin till within two or three days before the crop was cut for green fodder.

My average take of surplus this year was about eighteen pounds per hive against twenty-six in 1904.

With regard to the price of honey I have sold the whole of my 1905 season's crop, and 6½d. per lb. in bulk was the lowest price realised, and I could have disposed of more at the same price, notwithstanding the fact that there are several beekeepers round here who retail their surplus at sixpence rather than keep it by them for a few weeks. They all persist in rushing it on the market as soon as taken off the hives, and lose money in consequence of their haste to realise cash for it. Wishing you the compliments of the season and a successful New Year for all beekeepers.—"COTSWOLD," Oxon., December 7.

AMERICAN AND COLONIAL PAPERS.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Down Trodden Race.—Mr. Allen Latham, on page 775 of A. B. J., supplies Mr. York with at least *one* defender of Blacks in America, and he also mentions some points worth considering. It has somehow become fashionable to pass slurring remarks concerning the black bee. One hears it derided by those who have a large admixture of such blood among their own bees, and the writer is correct in setting this down as more or less of an unfounded prejudice. Why, to read certain contributions, one would think that all the ills that bee-life is heir to comes directly or indirectly from this black blood. Get foul brood, black brood, pickled brood, *no* brood in your apiaries, get the wax-moth to commit the depredations it can so well accomplish, let the vitality of your bees from whatever cause—and out certain bee-doctors trot the panacea for all ills, according to their narrow-minded and prejudiced rule of thumb—*get Italians!* Either these writers must be advising in crass ignorance, or on the other hand, in certain knowledge, which latter, of course, must imply that these blacks really exist there. If not, whence comes this knowledge? Two short quotations from Mr. Latham must suffice at present. "The Italians failed to come up to normal strength though breeding heavily, while the blacks seemed to hold their strength remarkably well. The disease has gone, and my faith in the black bee is coming back in all its strength, for which reason I desire now to point out still further its superiority to the Italian as a bee of profit *when bred with equal care.*" The italics are mine. Again, "How does this 'inferior' race with its (so-called), predisposition to yield to disease, its inability to cope with its enemy the moth, its weak honey-getting powers, and its general all-round worthlessness—how does this black bee, I repeat, manage to run out of existence its yellow cousin, whose splendid attributes are printed on the advertising sheets of every journal devoted to apiculture?" Mr. Hasty (page 795), "thinks them better for comb honey," Professor Cook (page 808), says "the black type give a very white grade of honey." Dr. Miller, in *Gleanings* (page 1173), inferentially states that he has bees at least nearly black, who "bring in the honey away ahead of any of the three banders." Mr. Green lately recorded that he carried a large number of hives a long distance without closing entrances, and they were blacks. So that even in America blacks have some good points. Further, I submit Mr. Root's contention in *Gleanings* (page 1178), that "Black queens are hard to find," must be taken with a grain of salt.

Now, I have submitted at least some testimony that blacks *can* overcome disease, that, bred with care, they are at least equal to Italians, that they can resist disease, if strong, equally well, I know they can keep the moth at bay; they are superior for comb-honey, especially in their capping, they can be got gentle, as gentle as any race. Even editors might reconsider the whole question, and credit the

(*Continued on page* 506.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Our friend Mr. Dyer makes another addition to the list of railway men who are good bee-keepers, and we are rather sorry not to have had more details of his profit-making from the bees he loves so well. His "Notes" are, however, useful and interesting. He says:—

"I herewith send a photo of my apiary, and, if suitable, you will perhaps include it in 'Homes of the Honey Bee.' In sending a few lines to go along with picture, I will confine myself to the photo as much as possible.

"I purchased my first swarm in 1893, after having made my first hive from used boxes; this is the second one on the right of your humble servant in the picture. From that time forward I have made all the hives except the last one, on my left. The first three gave me some trouble in manipulating until I converted them, as I commenced bee-keeping without the aid of any literature whatever, picking up what information I could until I became the possessor of a 'Guide Book,' which is, to my mind, indispensable to a bee-man. I next joined the County Association, and soon after had a slight attack of 'bee-fever,' since when, with plenty of work, I made very satisfactory progress, ending by having gained my third-class certificate. I purchase the timber and make my hives in winter evenings—one or two each year as time permits, as, of course, all other bee-work has to be done. Seeing that I am away from home working on the railway as a platelayer from 6 a.m. till 6 p.m., and as seen in photo I live at a railway crossing, my better half, in addition to being gate-keeper, is an ideal bee-man's wife.

"I drive a small iron spike in the legs of all hives, in addition to which they stand on a piece of slate to preserve the legs. I have requeened all the stocks seen except two, and have spare queens in nucleus boxes now.

"I break up combs and repair hives in rotation every three years as a preventive of foul brood, and am very partial to the carbolic-cloth for all summer work. The background seen in the picture is a row of the beautiful Melilotus, which I consider one of the prettiest of all bee-plants, and have harvested about a gallon of seed from it.

MR. C. W. DYER'S APIARY, COMPTING CROSSING, COMPTON, BERKSHIRE

"We cannot boast of large takes of honey, the average being about 30 lb. per hive, although quality is all that one could wish for. As the greenhouse is conspicuous in the picture, and I am a bit proud of it (I find it very useful for extracting purposes), I would like to say it was practically built by myself before being put up. It was made in sections, each side separately, and bolted together with screws and nuts at the corners. It took me about two years to complete, and was finished in 1902; unfortunately, only the back is shown, with potting-shed and boiler house, as I could not show the frontage with a full view of the apiary. It has a span-roof 10

feet high, the floor is 9 feet square; all the frame-work is pitch pine, being some disused signal-posts which I purchased from the railway company. Our readers who are amateur carpenters will sympathise with me in the sawing and planing when I say these posts were 13 inches square at the largest end, and I sawed them down with the hand-saw!—a job I would never like to do again.

"The whole stands on a thirty-pole plot of garden in a field at the back of the house, which can be seen by the barley ready for reaping. Apologising for departing from the subject of the picture, I should like to say the $4\frac{1}{4}$ by $4\frac{1}{4}$ by 1 15-16 inch section, in my opinion, cannot be improved on. I conclude by wishing our Editors and all bee-keepers prosperity for the year 1906."

("*Notes and Comments*," *continued from page* 504.)

black bees with at least the good points which are manifestly their due.

Wax Rendering.—Quite recently I drew attention to a new wax extractor of German origin, wherein I considered was at least the germ of what in the future will be the best means of extracting wax so that no residue will be left in the "slumgum." Mr. Arthur C. Miller has this to say of it:—"Within that little contrivance lie the true principles for the extraction of wax," and Mr. Whitney gives it as his opinion, that the idea "hits the nail on the head. Any contrivance that shall cut, and perhaps grind into small particles the comb and slumgum, thus allowing the hot water to come in close contact with the wax, thereby liberating it, and enabling it by its less specific gravity to rise to the surface of the water, would, it seems to me, come nearer to perfection than any other wax-press I know." Apparently the pressure German wax-press has not been a full success in America. The fabric gives way when too much pressure is brought to bear and too mild a pressure leaves a residue in the dross. This necessitates only small quantities being inserted at a time, which makes a tedious and messy job. We may be approaching perfection in wax rendering, but seemingly we have not yet attained it.

While on the subject of wax, I may give means by which nice cakes can be got without cracks. With small quantities the common plan is to leave the cake in the kitchen oven, and allow it to cool off gradually as the fire dies down. Generally in the morning a nice clean whole cake can be taken out. Some place the receptacle in a dish of hot water and keep this warm by repeatedly adding a little boiling water to insure that the mass cools very slowly. *Gleanings* advises, for large quantities, to dip the wax from one tub to another. When the hot wax is poured back and forth from one tub to another, the whole mass becomes cooled more uniformly, hence there is no cracking. The *Review* states that although wax is usually sold at about 25 cents per lb., the writer sells his at 50 cents, and this he obtains without seeking a customer, as they seek him. He makes even the more astonishing statement that 20s., or more, can easily be made from the wax of half a dozen colonies. I know I can't make one-fourth of that. Can others? If so, I must utter another "Wail on Wax Rendering," and get more light.

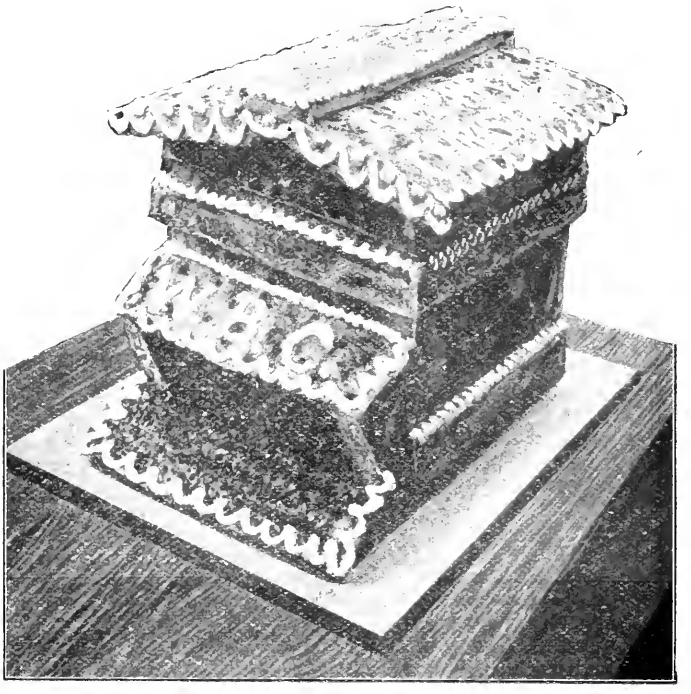
Tarred Paper Protection for Hives.—I rather think Mr. A. C. Miller has given a good thing to his brother editor of the *Review*. "Tarred building-paper possesses the desired properties for a hive wrapping to a higher degree than anything else I know of. A sheet of this laid on the top of a hive and folded down about the sides as one would wrap a bundle, the lower edges of the paper coming below the edge of the bottom board, except at the entrance, and these lower edges fastened down with strips of wood (Mr. Hutchinson illustrates it), will make a hive impervious to wind or moisture." He claims for it that because of its black colour it readily absorbs the heat of the sun's rays, thus warming the hive and its contents; and again, because of its poor conductivity, as it does not lie closely against the hive, it prevents the rapid radiation of heat. In other words, the material is wind and waterproof, and while it absorbs heat rapidly, and in good volume, it gives it up slowly. *If so*, it must tend to the comfort of the bees, and be a considerable saving in food.

Killing Wax-Moth.—In America they are frequently afflicted by the ravages of the larger wax-moth (*Galleria cereana*), which is fortunately rather a rare visitor in this country, although at times it works sad havoc in spare combs. A writer in the *Canadian Bee Journal* records fumigating 600 combs with five ounces of bisulphide of carbon. Placing the combs in a box, he poured the bisulphide into two old plates *on top* of the combs, as it works downward, being heavier than the air. An examination of the combs later showed no grubs alive, and the dead ones black as tar. The combs were effectually cleared of wax-moth. About the same quantity of sulphur placed in an old dish *below* will also work a cure, and kill out both moths and grubs. If it is at a period of the year when eggs may survive, it may be best to go through the process a second time about a month after the first operation to insure that that any eggs which may have

hatched in the interval may be exterminated. Eggs have a wonderful vitality, and stand a large amount of fumigation.

CHRISTMAS GREETINGS.

Among many Christmas cards, etc., gratefully received from time to time, as seasonable tokens of goodwill, by the Editors, the one illustrated on this page, to use a common colloquialism, literally "takes the cake." It was made by our esteemed correspondent, Br. Colomban, whose name will be familiar to readers by



A UNIQUE CHRISTMAS CAKE.

his recipe for making bee-candy, which proves his skill as a confectioner.

The cake shown in photo is made entirely of honey gingerbread—extensively used in Germany by all classes of the community and is decorated with the sugar-piping used by confectioners. On the hive-roof being raised some time after its receipt, the "body-box" was found (much to the surprise of the recipient) packed full—from floor-board to roof of honey-cakes and honey-sweetmeats, all of excellent quality and flavour, as attested by the many consumers who shared in partaking of the first "W.B.C." hive ever cut up and eaten!—[The JUNIOR EDITOR.]

Queries and Replies.

[3979.] *Making Artificial Swarms.*—1. On going to my apiary a few days ago (December 7), I was surprised to find one hive quite in a commotion, with many bees on the alighting-board and others on the wing, all in a state of excitement. The sun was shining brightly at the time, but the day was a bit cold. I opened the entrance wide to allow the crowd of bees to enter, and in a few minutes all had gone in and were quiet again. As the hive was warmly packed, I did not disturb it to try and find the cause of upset, but will be glad if you will give me your opinion thereon? 2. I have rented a piece of land about three-quarters of a mile away, and at present have one hive there. In the spring, however, I should like to remove two or three frames of brood from each hive in my home apiary to a new hive, then carry the latter to the other place and set it on the stand of the hive now there, removing the latter to another stand some distance away. By this method I should get the flying bees of the hive moved into the one with combs of brood only, and thus make an artificial swarm as directed in the

"Guide Book." Do you think it will be safe to keep the brood uncovered with bees while carrying it to my new place? I would of course, choose a warm day for operating, if you think it can be done without chilling the brood, if well covered up. Thanking you for past help, I send name for reference, and sign CHESTERTON, Oxon, December 13. — — —

REPLY.—1. The commotion seen would in all probability be caused simply by the warm sun tempting the bees out for an airing flight. 2. If great care was taken, by covering the brood carefully and placing a couple of warm bricks above the top bars, no harm would follow removal. We should, however, not try your method ourselves, but prefer leaving the stocks in home apiary undisturbed, and make the artificial swarm from the single hive in the out apiary, as directed in "Guide Book."

[3980.] *Spacing Frames with "W. B. C." Ends.*—On page 41 of "Guide Book," in referring to the use of "W. B. C." ends, it says, "two strips of wood, three-eighths inch deep and three-sixteenths inch wide, will be required, one at each end, to increase the distance between the face of comb and hive sides in the outer combs." Why is this? I send rough sketch to explain my idea, by which it appears to me that if the three-sixteenths inch strips are used, the bees will build-out the face of comb to line A. If this is done, and you wish to transpose the outside combs to centre, there will not be a bee-space between the face of those combs and adjoining ones (as shown in sketch), between "A" and "B," if frame 1 is placed in position of frame 2. An answer in JOURNAL will oblige. I enclose card, and sign "CARBON," Co. Durham, December 6.

REPLY.—It was hardly worth while incurring cost of engraving the sketch sent, but by discarding theory and relying on directions in Mr. Cowan's guide book, you will not go far wrong in practice. As a matter of fact, your imaginary line "A" does not come in at all in working, as we hope to make clear. Broadly speaking, then, the W. B. C. end (see "Guide Book," Fig. 16), projects $\frac{1}{4}$-in. on each side beyond the top-bar, and when frames are in position, there is a $\frac{1}{2}$-in. space between top bars (see A, Fig. 20). But the outer frames have—on one side—only a $\frac{1}{4}$-in. space between outside face of comb and the hive side (see B, Fig. 20), and the three-sixteenths slip of wood inserted in order to allow a little lateral space for withdrawing the outer comb when manipulating. The advantage of this will be seen at once in practical bee-work, while the disadvantage feared by our correspondent is entirely imaginary.

[3981.] *Making Bee-candy.* — I should esteem it a favour if you would say if you consider the enclosed candy a suitable bee-food. I have for years followed the instructions given in B.B.J. and *Record* with success in the management of my bees; but, unfortunately, I have this year left the feeding-up for winter too late for perfect safety, although I have about 70 lb. of syrup left over, which I should have liked to utilise in making candy. I have been told that by mixing icing sugar with the syrup (when warm) to the consistency of thick paste a good candy could be made, which I tried, although I evidently got too much syrup in, so added more icing sugar, and boiled the whole for a few minutes. Thanking you in anticipation of reply, I send name, etc., and sign—CANDY, Derbyshire, December 16.

REPLY.—1. Your sample of candy is quite unsuitable for use as bee-food, and if the bees had to rely entirely on it for winter the probability is that they would be dead before February next. What is known as "Good" candy (so-called after the bee-keeper who introduced it in America) is made from honey, not syrup, into which is stirred a sufficient quantity of finely-powdered sugar to make a stiff paste. You might try adding sufficient sugar to make, say, a half-pint of the syrup of the same consistency as "Good" candy, but do not boil or even make it hot before use.

[3982.] *Judging Heather Sections.* — I am writing to ask if you will please give me your opinion on flavour and source of honey in the section forwarded by parcels post? In connection therewith I must say that in reply to an advertisement of heather sections for sale, I wrote requesting the advertiser to send me on eight sections, which duly came safe to hand; as did also six jars of heather honey from the same place. Three of the eight sections we have already eaten (the flavour being excellent), but the fourth when cut into, was found to be so rank in flavour and aroma, that we could not eat it, and the other four are equally unfit for table use. The extracted honey, however, is very good indeed. The bee-keeper from whom the honey was purchased, knows that I am sending one section for your opinion thereon, my own view being that he ought either to replace the objectionable ones or return the money paid for the other five. I do not think that half of the honey in the sections referred to is from heather at all. I shall want to inspect heather sections before purchasing another time, for I should think no one would eat such rank honey as that sent for you to kindly report on. I should suppose that anyone can detect pure heather honey by the lovely smell, even at

some distance away. I send name, etc., and sign "SURREY," December 7.

REPLY.—The section of honey sent has puzzled us not a little, in view of what is said above with regard to it. In fact, we would willingly pay cost of a sample of the heather honey considered "excellent" in order that we may compare it with section received. We will then reply fully by return post, and publish same in following issue, as being of general interest.

[3983.] *The Claustral Detention System.*—I propose using the Claustral detention chamber this spring, and it will be necessary to supply the bees with water within the hive. Will you kindly tell me whether you think it will do to fill an empty comb with water and insert it by brood-nest? I generally give the bees flour candy in spring, so cannot use a slow feeder for this purpose.—S. K. S., Birmingham, December 15.

REPLY.—We should not advise putting water in comb as proposed. There can be no better way of supplying the bees' want of water—during confinement in spring—than by giving "sweetened water" in an improvised bottle-feeder, as mentioned in the article on the Claustral hive and detention chamber in our issue of March 30.

[3984.] *Size of Entrance for Hives.*—1. Since three-sixteenths inch is the orthodox bee-space, I ask, should this always be the height of the space left for the bees to enter the hive? 2. In my hives I have made it nearly ½-inch; should I reduce it to the bee space? 3. Mention is made on page 34 in the "B. B. K. Guide Book," of "Lee's continuous dovetail joint." Can you tell me in what way this differs from ordinary dove-tailing.—"NOVICE," Loughboro,' December 15.

REPLY.—1. Three-sixteenths of an inch is the space through which a worker bee can pass, but has no reference to the height of entrance to a hive. The height should in no case be less than three-eighths inch. Indeed, our preference is for a half-inch entrance, and most hives are made with doorways of that height. 2. No; leave entrance as it is now. 3. The difference between "Lee's," and the ordinary dovetail joint, consists in the former being "continuous," as the name implies. In other words, it runs along the whole length of the wood in which it is cut.

[3985.] *Walthamstow as a Bee-district.*—Could you give me any advice as to making a start at bee-keeping in Walthamstow? From my house there are no fields nearer than about half a mile, but there are gardens with fruit trees all round. I have seen white clover growing two or three miles away, and a bee-keeper located about a mile from me does well, I am told; but he is out of the town, and there are no houses about his place. I will be glad to know if it is possible for me to make a start.—W. E. DUXSON, Walthamstow, Essex, December 15.

REPLY.—If your neighbour, whose bees are only a mile away, makes a success of his bee-keeping, we see no reason why it should not be worth trying a few stocks at Walthamstow, though we have no personal knowledge of the neighbourhood.

AN APICULTURAL ALPHABET.

A is for Apis, related to Ant,
Pons Asinorum for scientists' cant.
A 's where it should be, right here at the start;
A begins all apicultural art.

B is for Bee, both busy and bright;
Some bees are stingless, but beggars to bite!
Benton is scouring the East for the West,
But big bees or bumbles, the black bees are best.

C 's Carniolan for capping of comb
Carefully capsuled as white as the foam.
C is for Cowan, and Cheshire, and Carr;
I could add my own name, but won't go so far!

D is disease, the damp dew of decay
Drives all your dreams of division away:
Drastic your duty, don't dabble with death,
Or a very big "D" may discolour your breath.

E is their Evensong,—e'en then no ease—
Hymned in the entrance by thanksgiving bees.
E is Elixir,—that 's honey, not jam:
E is the expert, as proved by exam.

F is the fire of fuel alight,
Making the diff'rence twixt fury and fright.
F is foundation, well known to those versed,
"Fresh from the factory" "finished the first."

G. Golden Guide. "Go gently"; because
As a guard 'tis as good as both gauntlets and gauze.
G is the grading of honey for sale:
G is goodbye to the gust and the gale.

H is the hatred of hybrids aroused,
Also the hive where the hustlers are housed.
H is for Huber, who, blind, yet could see.
H is for honey, the heather for me.

I for Italian, I admire their backs;
Somehow they don't do as well as my blacks.
Ideas, inventions, and "isms" involved,
Issues of interest, instincts unsolved.

J is for January, just at our doors;
Jump around now with those fixtures of yours!
J is for joke, the dull time to beguile:
Jovial old *Journal*, now do try to smile.

K is a key, and a kind of tin kettle,
Knocked by old keepers to make the king settle!
K is the King bee! I fear he 's deceased,
Killed by some captious old critical beast.

L is a life full of law we believe;
Laggards lack leisure their labour to leave.
Three LLL's for Langstroth, they'll linger alive
Till the last of his lovers has kept the last hive.

M is the meadow a-milked by the might
Of each miniature midget amassing its mite.
Mellifluent muckles make mickles or more;
Man 's the magician who makes up the store.

N stands for numerous nurses; each dame
Knowing no doubt her own nurselings by name!
Naught of nectareal need in the nest
Neglected, from nit to the nymph night of rest.

O for observatory hive, where one looks
For ocular proof of the objects of books;
Overlooks oviposition, and on
To obituary orders when old ones are gone.

P is for propolis, plastered and packed.
"Product and practice" the prizes attract.
Parasites piercing predaciously, probe
Pellets of pollen, and patience of Job.

Q is the Queen: If a hen did but lay
Half of the quantity she does a day,
Eggs would be cheaper, that 's all. Kindly note
Quinquennial queries queer questioners quote.

R is the rout, when the rascals with rage
Ravening, ruthless and rabid, rampage:
R is for robber bee, reckless and rash;
Ramparts of wet grass will settle his hash.

S is for Summer, and also for Spring,
Sainfoin and sugar, and sometimes for sting!
S is for swarm, with the bees going strong;
S is for sunshine, and supers, and song.

T is for theory and tea-table talk:
T is the test which tells beeswax from chalk!
T is Te Deum when task time is o'er;
T is their torpor though tempest may roar.

U is the ultimate upshot and use
Unseen, unsolved, unless we deduce
Utility, unity, urged upon us:
U is Utopia, system not fuss.

V is vagary: Applied to the bee,
"Nothing invariably" hits to a T.
V is for verse, three or four will complete;
V very sorry for any false feet!

W. Winter with bees "wrop up warm,"
Quietly waiting to work for the swarm;
Nor wond'ring, nor wishing, nor wild to be free;
Wonderful waxworkers wiser than we.

X is for xanthine, a guide to the bees:
X is xenodochy, lacking in these:
X is xerophagy, pollen alone:
X is for lots of things written and done!

Y is for yellow bees, Yankee yclept;
Yesterday's goldens get hybrid if kept.
Y is the Yuletide, your time of good cheer,
Yearning great things for the yield of next year.

Z is a zigzag, the entrance to screen:
Z is the zinc which excludes the poor queen.
Z is for ZZZZ, which means move if you please:
Z is the end of this song about BEEZ!

L. S. Crawshaw.

Ilkley, Yorks., December 15, 1905.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

A correspondent who signs "W." writes as follows:—"Will any reader of the B.B.J. tell me where I can purchase honey jars with nickel caps, holding ½ lb. net? I have received samples from several firms, some holding 9 oz., and none less than 8½ oz; but if one is selling honey wholesale even a half-ounce overweight in each jar is a considerable item in a gross or more."

*** Referring to the letter signed "Mid-Oxon" (6137, page 497), Mr. George Rose, Great Charlotte Street, Liverpool, requests us to say that he stocks complete outfits for fumigating with Formaline, and that full particulars with directions for use will be found in his catalogue.

J. J. Johnson (Peterboro').—Varieties of Heaths.—The sprig of heather sent is the true *Calluna vulgaris*, but bloom is so dried up as to be almost unrecognisable.

G. C. (Sheffield).—Candy Making.—Your sample of candy is not at all good, being coarse in grain, as if not boiled nearly long enough. We do not know whose recipe has been followed, but the result is unsatisfactory. Nor can we "say how long a late swarm of this year should be in consuming a 2-lb. cake of candy as sample." Our advice is not to rely on it as food for carrying the bees through the winter.

Novice (Leeds).—Candy-making.—Your first attempt at making candy according to Br. Colomban's recipe is by no means a success. It is hard and coarse in grain, and does not appear to be more than half boiled. Read the directions again, and follow closely. Several of our readers have sent samples made from the same recipe, which are very good indeed.

C. S. S. (Weymouth).—Débris Cast out of Hives.—The contents of box sent seems like an accumulation of hard pollen and cocoons, black with age, etc, left by the bees tearing down old combs with the view of rebuilding. We do not think there is anything to fear so far as regards suspicion of disease in the hive in question.

Several articles, including the continuation of Mr. Brice's paper on "How to Achieve Success," are unavoidably held over for want of space.

Editorial, Notices, &c.

THE CLOSING YEAR.

Before our next issue 1905 will belong to the past; another year gone by; another year's work ended. Nor can we close the final page of our thirty-third volume without reflections from which a tinge of sadness is inseparable, at least to those of us who are among the veterans of our craft. But amid our regrets at the vacant places formerly occupied by well-known bee-men who have worked long and lovingly for the advancement of bee-keeping, there is a feeling of pleasure and thankfulness in seeing young enthusiasts springing up around us to whom we may safely hand over the work when our own busy time is done.

With regard to the prospects before us of the bee-keeping industry— we need have no fear for its future, judging by the present signs, and in wishing to all a happy and prosperous New Year, we add a line to say how sincerely we appreciate the numerous expressions of goodwill towards ourselves and "continued prosperity to the BEE JOURNAL" received by every post of late. Our earnest wish is that the number of those among us who "strive only after that which is right" may continue to increase as succeeding years go by. THE EDITORS.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, 20th inst., Mr. W. F. Reid being voted to the chair. There were also present Messrs. R. T. Andrews, L. Belsham, T. Bevan, W. Broughton Carr, J. B. Lamb, W. Sole, E. D. Till, E. Walker, and the Secretary. Apologies for inability to attend were received from Rev. W. E. Burkitt, Messrs. R. Godson, W. H. Harris and T. I. Weston.

The minutes of the previous meeting were read and confirmed. Miss Rachael J. Stephenson, Bodenham House, Salisbury, was duly elected to membership.

The report of the Finance Committee, giving details of receipts and expenditure to date, was received and adopted.

A very full and explicit report in regard to the recent examination fo rsecond-class expert certificates was considered, and as a result it was decided to grant diplomas to the following twenty candidates, viz.:— Misses K. Barratt, May Britten, Lena French, Dorothy Greaves, K. M. Hall, E. McKerrow, Lucy Pollard, E. Rix, Mary Rogers, Rev. D. R. Jones, Rev. H. Morgan, Dr. Jas. Arnott, Messrs. L. Bowman, R. H. Coltman, A. J. Dover, Jas. Grimwood, Henry Marrs, Chas. Munckton, J. G. Nicholson, and John Vicars.

It was resolved to take into further consideration early in 1906 several matters brought forward for discussion at the last improvements in the Standard frame, and the desirability, or otherwise, of collecting samples of honey from known sources, etc. conversazione, including the suggested

The next meeting of the Council will be held on Wednesday, January 17.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith Illustrations should be drawn on separate pieces of paper We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

DEALING WITH VICIOUS BEES.

[6147.] If any reader is troubled with really vicious bees, determined to rush out in a body to attack as soon as the hive is approached, he might try the following when there is any necessity to manipulate them:—Charge the smoker with part of an old quill which has got worn out by long use. It will be pretty heavily propolised, possibly on both sides. Being of a rather inflammable substance generally, it may be made up into a roll with alternate layers of some slow burning material. Thus treated, it will send out dense clouds of very pungent smoke, which will effectually check any attack from the bees on the operator. A very little of it will go a long way, so that too much should not be used, because bees might perhaps be injured by inhaling too strong a dose of this powerful intimidant.

"*The Land of the Rising Sun.*"—Japan seems to be advancing in bee culture as well as in other ways. A School of Apiculture has been started at Tokio. Members can join the classes in two ways, at home or in school. The central tuition will last for three months, and deal with every branch of instruction, practically as well as theoretically, so that students at the end of the course should have a good grasp of the subject. Or they may study at home in something like what we would call the correspondence class style. Books are being published on the subject at a cheap price, giving in detail all our best and most modern methods. One, apparently on the

lines of our "Modern Bee-keeping," is sold in paper covers at about 5d., and it has gone through several editions. A Bee-keepers' Association has been formed for the extension and improvement of the industry. The idea, it would seem, is to make it more an adjunct to other trades or occupations than a business in which to engage by itself, but the new endeavour is to push it on modern lines. Taking advantage of recent developments and improvements in Western lands, it should be easy to start it on a solid basis. While, however, the recent impetus is new, bees have been kept in the "Flowery Land" for several years under modern methods, because some time ago at least one of our principal manufacturers shipped large consignments of hives and appliances—and even obtained a "Queen Bee" to grace his own home.

Top Entrances.—This subject crops up occasionally in the bee journals. It is claimed by a few that if bees enter between the brood body and the supers that surplus honey is more likely to be consigned to the latter, with the result that a larger total is secured at the end of the season—indeed, several Continental bee-keepers assert that this really happens. The latest account I have seen, where experiments were carried on with twenty hives on this system, and the same number of orthodox lines, showed no advantage from the innovation. So far as I know, only one bee-keeper in this country has tried the experiment. His apiary was once shown in the "Homes of the Honey Bee." I just wonder if he keeps it up, or has he after trial reverted to the floorboard front entrance. Many German straw hives have their entrances half way up, such as the Bogenstulper, and Dzierzon gave it as his opinion that "entrances are most suitably situated at half the height of the hives." I fail to see many distinct advantages, but I feel that several disadvantages would be introduced by this change.

An Early Winter.—During October, November, and up to December 3rd we had very stormy weather, but that day, a Sunday, was remarkably mild, and bees had a splendid cleansing flight, while evidence was observed showing that they had shifted stores to prepare for future contingencies. Ten weeks' imprisonment at this early date is not a common occurrence even so far north as here. But the season was altogether exceptional. Many upland farmers, owing to about ten weeks' almost constant rain, secured their corn crops during the first week of December. The proverbial oldest inhabitant never remembers so late and protracted a harvest. Bees enter on their long rest with plenty of stores and a very fair percentage of young bees, so that they should be safe until the voice of spring rouses them.

Tempus Fugit!—How short a time it is since we ushered in the dying year, then young and full of promise. When this issue reaches readers it will be in its last throes, and we will all be getting ready to welcome he new one. "Hope springs eternal in a bee-man's breast," so we will look forward with every confidence to the advent of '06. Personally, I can say that if apiculturally it proves as good as its predecessor I will be perfectly content; I will close wishing all readers of the "Journal" a bumper season; and trusting Volume 34 will be an advance on all those already completed.—D. M. M., Banff.

NOTES BY A "HOMELESS" BEE-KEEPER.

[6148.] You may be interested to hear that after being homeless for about three years I have settled down again—but although "homeless" for that time I still stuck to my bees, and in spite of having to move them no less than *four* times from one temporary place to another. These removals were all done by horse and cart, and in no case was any loss or damage sustained. One journey was about eighteen miles, and being early summer, when the days were getting long, and not having the heart to pack up the hives until all the bees were home, the start was not made until after eight p.m.

I fear that I should not be able to give a very encouraging answer to the question at present being aired in the "Journal," *Do Bees Pay?* I think in each case it has paid the men who have moved them for the best. I don't consider that my bees have very handsomely rewarded me for my care of them; for this year, their first summer in their new home, I have had a far worse harvest than I have ever had since I began bee-keeping. The reason is that early in June my three hives swarmed almost simultaneously, and the three swarms settled together *in* a hedge. I say *in* a hedge advisedly, for they reached from the top to the ground, and were mixed up with some wire netting running all along the hedge. I saw no other course than to hive this enormous swarm in a fresh hive, and it took the best part of the day to do it. However, I got them in, and gave them five racks of sections already partly filled, from the parent hives, and they crowded right up to the top. But this enormous swarm did not do much, indeed, owing to the rather sudden stoppage of the honey flow, I think they even took down some of the honey which was in the supers when they were first put on, the result being that I only got about thirty properly finished sections. All unfinished sections I always give back to the bees during September, and let them take it down at their leisure.

I made one of the swarmed hives give me a little nucleus in which I raised a young queen, which later on I introduced into the hive containing the triple swarm after the moving the old queen, so all my hives are now headed by young queens, and I hope will do better next year.—G. S. N., Surrey. December 11.

[Very pleased to hear of your having settled down once more, and that "the bees" have not been homeless in the meantime. We shall now hope to be favoured with some notes—always interesting—from you as formerly.—EDS.]

RAILWAY RATES FOR HONEY.

[6149.] Having read in the last two issues of the B.B.J. the contradictory correspondence of Mr. Woodley and J. Huxley re "the high rate of carriage of honey," I am sending a little experience of mine.

A few days back I forwarded from Dorking Station (S.E. and C. Railway), to a customer in Coventry, twelve 1lb. jars of honey, nicely packed with shavings in a "Swiss milk" box. I omitted to inquire the cost of carriage (which, I presume, in the case of breaking would have been at my risk). So you may guess how surprised I was to learn that 3s. 9d. was paid on delivery, being 1½d. per pound, as each jar weighed 24 ozs. The total weight was 30 lb., including box.

The station agent afterwards informed me that labelling it "Glass" added 50 per cent. to carriage.

Therefore, for 9s. worth of honey I have to expend: carriage, 3s. 9d.; box, labels, and tie-over jars, 9d.; total, 4s. 6d., or just half its value. I was expecting a repeat order, as in the part of Warwickshire mentioned honey is not plentiful, but with this high rate I cannot keep bees with profit, when my returns are barely 4½d. per lb. for small quantities. In conclusion, I may say the chief reason I write is to complain of the high rates for small bee-keepers who do not handle tons but stones of honey.—GEO. F. SANDARS, Dorking, Surrey, December 20.

HIGH RATES AND OWNER'S RISK.

ANOTHER RAILWAY MAN'S VIEW.

[6150.] In reply to "A Brother Signalman," J. Huxley (6136, page 496), I should like to say most of us who are exhibitors know—or ought to know—the rate at which honey should be carried. Surely no one would think of sending sections by goods train. Writing from an exhibitor's point of view, it is safe to say if I did not know the particular rates to send by, it would mean a loss of pounds to me. Although the railway companies only carry sections at owner's risk, they will charge ordinary parcels' rate if possible. It is of no use for Mr. Huxley to say, if Mr. Woodley "will prove his loss is caused by wilful and gross carelessness of porters," he has his redress. How can that be proved unless you travel with the goods? Two years ago I sent an exhibit of sections to a show in Wales. They were well packed, and box had on it a printed label in large red letters, "Comb honey, with care." Yet every section was found to be smashed. I showed the package and contents to the chief clerk in parcel office and told him they could have it, as the contents were of no value to me. His reply was, "Take it away, and send in your claim." I did so, and three days afterwards received a reply to say the package was carried at "O.R." rate and I had no claim. I could not prove that they had been thrown into the van or on to the platform. I think very few of the travelling public have failed to see the gross carelessness of some porters in throwing goods about, but how is the owner to prove his case? I admit the officials would not allow this if they saw it, but my experience of thirty-two years as a railway servant enables me to judge.—J. P., Derby, December 18.

TALL VERSUS SQUARE SECTIONS.

[6151.] I, for one, was pleased to see the discussion on the relative merits of tall versus square sections, and beg to add my experience of the former. The tall sections take about 23.4 per cent. more foundation and 23.4 per cent. more capping each side. I have given them a fair trial for the past three seasons, and cannot see where the advantage comes in. I have altered a number of my square section-racks, and made others specially for the 5 by 4 size, and now wish I had not.

Reference has also been made to the strength of the top-bars of frames. Some ten years ago or so Mr. Woodley said that he used them about 1⅛ in. wide in middle (shouldered out in same way as the beeway in sections, as I understood). I have over 1,000 of them in use, and after trying various metal ends, prefer Mr. Woodley's plan, for they never "sag," and when made true at first never "wind," and as a consequence hang "true," and combs are built exactly in centre of frames. Another advantage is, the shoulders allow a firm grip of the frames when manipulating. I prefer, and use, 15¾ in. top-bars. Thus, with ¾ inch sides to brood-box (reducing by planing to ⅝ in.), 14⅛ in. between sides and 1¼ in. the thickness of two sides, makes the 15¾ in., and with cleats nailed on each

side forming a perfect self-spacer, and the cleats also form lifts. The frame ends at cut to a $15\frac{3}{4}$-in. radius, then when moving they do not "jam." As regards the "Claustral chamber" (6131), in my opinion, if the brood-box is made separate from the floor and outer case—and long enough to take fourteen or fifteen frames, as it ought to be—you can, with a hole, say, the size of a wine-bottle cork in the contracting-board, have a detention-chamber at either side, or front or back, as desired, according to the way frames hang. The roof escape (if one) must, of course, be plugged. I find this fulfils all that is claimed for the "Claustral chamber" without extra expense; and with these long hives, too, "the back yard" can be used to put in extracted combs for cleaning or to put in a rapid feeder. Anyway, I find they answer admirably. I feel sure that anyone once using a 14 or 15 frame-hive would never again tolerate a 10-frame one. —FRANK JARVIS, North Bucks, December 16.

[We confess our inability to quite understand the description given above of top-bars, frames, metal ends, cleats, self-spacers, etc., and the methods of making them, and must therefore leave to clearer-headed readers the task of estimating Mr. Jarvis's methods at their proper value. We must, however, be allowed to say that he has failed to grasp M. Gouttefangeas' ideas in devising the "Claustral chamber" described and illustrated in former issues of the B.B.J., or he would surely not have referred to it in the way he has in the above communication.—EDS.]

CAUSING SWARMS TO SETTLE.

[6152.] I wonder if any of your readers have heard of the superstition that obtains here—that when bees are swarming and likely to rise and fly far, they will be sure to settle at once if a handful of earth is thrown up towards them? It is certainly simple and worth trying. This has not been a good honey season in Jersey in spite of the fine weather, and many bee-keepers have had hardly any surplus; but I managed to secure 52 lb. of good light-coloured honey from my two hives, and so I consider myself fortunate. Apologising for the length of my letter, I send name and sign—A READER, Jersey, December 18.

[It is quite possible that a few handfuls of loose soil, if it could be thrown among the bees, might have the effect of upsetting an intended run-away flight and cause them to settle; but a far better method of doing it is to give them a good spraying with water from a garden syringe. This has much the same effect as a shower of rain, which brings the bees down at any time if it comes on while they are in the act of swarming.—EDS.]

SAMPLES OF UNMIXED HONEY.

FROM SPECIAL SOURCES.

[6153.] I am forwarding a sample of honey, as per Col. Walker's suggestion in B.B.J. of December 7 (page 482), that I believe to be entirely from the "ling" heather (*calluna vulgaris*), growing within 100 yards of my apiary, viz., the Fox Hills; and owing to the "bell" heather (*Erica cinerea*) blooming earlier than usual, I was able to secure some like the sample, which, I think, may be accepted as "unmixed." Your opinion on this point would be deemed a favour.—W. A. WOODS, Normandy, Guildford.

[We quite agree with you in regard to sample being entirely from "ling."—EDS.]

BEES AND THEIR ENEMIES.

[6154.] I have noticed in the pages of the BRITISH BEE JOURNAL several letters of late relating to the question of bee-enemies, and would like to add a few remarks on the subject. On visiting the bee department at the Dairy Show, held in the Agricultural Hall, London, last October, I saw a very interesting case containing a collection of "Enemies of the Bee." Amongst these, I noticed a little Blue Tit, and for it I would put in a plea for mercy. I have noticed that some, at least, of your correspondents, when referring to bees' enemies, make mention of Tits and Sparrows, but do not define what sort of Tit and Sparrow they allude to. I have plenty of the common house Sparrow building yearly close to my hives, yet I never saw one touch a bee that I can remember; but is this the particular bird referred to by your correspondents, or is it the true Sparrow—a much rarer bird—although not unlike the common Sparrow, but rather smaller and brighter in plumage. This Sparrow is to be found in the North of Scotland, where I have seen it myself; it is also comparatively common in some parts of England. I do not here refer to a bird commonly called the Hedge Sparrow, very incorrectly, as this bird is not of the Finch tribe at all. Then, again, as to the Tits, my little friends the Blue Tits build one or two nests in my garden every year, either in a little box hung up for its convenience, or, as this year, in a hole in the wall, and within a few yards of my hives. Yet I never saw one touch a bee, but on leaving their nests the old birds would fly off to the trees to search for food for their young. Not so, however, with the Large Tit, which bird also builds in a box

a few yards from some of my hives; he is, I am sorry to say, a most active despoiler of the bee-hives. I am sorry for this, because he—along with the other Tits—is a most useful bird, destroying—as do the others—an enormous number of the caterpillars and grubs so injurious in a garden. But the truth must out, and I cannot shield the Big Tit from any charges that have been brought against that family. I stood and watched him this summer catch bee after bee as they entered or left the hives. When he had caught one he would fly to a twig and there despatch the poor insect, then off to his nest and back in a minute for another. What destruction of bees this would mean in a single day is startling, so I intend to serve my gentleman with a notice to quit at the springtime, although I am sorry to have to do so, as he is so tame, as is also his mate, that they go in and out of their nest just above my head whilst I am sitting on the seat below; but he has proved himself to be an inveterate robber, as I watched him in the early spring catch bee after bee as they were busy on the catkins of the willow. One bee after another was caught and devoured before my eyes. But the little Blue Tit I have never seen so employed, and it is too bad to visit the faults of another on this useful little bird, employed all the year round as it is in destroying the pests of a garden. The same may be said of the little "Coal Tit," which also frequents my grounds, as it never touches the bees. I have not observed the Marsh Tit in this neighbourhood, although I have known it well in the past. I cannot, however, speak of its habits with regard to preying on bees. Although Sparrows do destroy an enormous number of grubs and caterpillars, yet they do so much mischief that I would not be very anxious to defend their character as enemies of the bees. It would, moreover, be easy to mistake the large Tit for a Sparrow at a little distance, as he is not much smaller, and his plumage at some seasons is not very brilliant.

Again, I fear another enemy of bees has not yet been mentioned in the pages of the B.B.J. The pretty little Fly Catcher, which sometimes builds in my garden, and also occasionally catches some bees; I have seen him sitting by the hives in a very suspicious way, and although he calls out "Mischief, mischief," when you go near his nest, it is he who may be caught doing mischief at the bee-hives, but he is not a common bird, and I am too fond of seeing him chasing the passing fly and then returning to the same twig from which he started, or his seat on the railing, to object to his taking a bee occasionally; this bird also must destroy an immense number of flies, which are a perfect pest at times.

Then, again, with regard to the Swallow, I was delighted last spring to see a pair searching for a nesting-place in my workshed close to my hives; this they succeeded in doing, and with my assistance fixed their nest on one of the rafters; here they hatched their young, and brought up the family. Standing with my back to the sun, I watched them flying in and out at the open window, going and returning in their search for food. In doing this they passed directly through a constant stream of bees that were passing out and into their hives, but I never saw them attempt to catch a bee. I often, however, saw the bees chase the swallows for some considerable distance, but the Swallows flew straight off to their hunting ground without, as far as I could see, taking the slightest notice of the bees. I have no House Martins about my house, although they build not far away, but I have never seen them come into the neighbourhood of the hives. Thus much about the bees' enemies, although I fear the list is by no means exhausted yet.

If I have not transgressed in the length of this paper, I would like to know whether any reader has noticed a mode of robbing that to me, at least, is new. This summer a neighbour bee-keeper brought me some black bees that he called Emmet bees; he had been told by someone that it was a distinct species of bee. I told him that in my opinion they were nothing but the common bee. He had killed these bees as they were attacking some of his hives. I am inclined to think that they came from one of my hives, the bees of which are Carniolan, as I noticed one of the same sort entering the hive, not as a robber, but as one returning to its own domain. I found these same black bees, that I take to be old and worn out well-nigh, busy at work with my own hives, not trying to rob in the way with which we are all familiar as bee-keepers, but hovering in the air all around the alighting board, especially one hive, the bees of which are very gentle. As the bees of this hive returned home laden, and alighted, one, or at times two or three, of these robber bees would attack it, hustling and jostling it and mounting on its back till the poor weary bee seemed perfectly bewildered, and at last quietly yielded up the contents of its honey sac to these impudent marauders. One, or sometimes two at a time, would thrust their proboscis into its mouth for this purpose, nor would they allow it to enter the hive until they had taken its hard-earned burden from it. I watched this going on for days, and what seemed to me strange was that these robbers had never sought to enter the hive, although at times they would attack the returning bees at the very entrance. The owners

of the hive took little or no notice of these strangers—in fact, they ran about plying their nefarious traffic in the most impudent manner. The hive that was the most victimised seems in a perfectly normal condition and worked well till late in the season. I am still hoping to see the Editor's thoughts in reference to the habit bees have of passing their forelegs over their antennæ just as they emerge from the hive into daylight. I think our senior Editor gave a sort of half promise that he would give his thoughts on the subject. I sign myself—H. Bee, Bridge of Allan, N.B., December 15.

Queries and Replies.

[3986.] *Bees Fighting in December.*—I am much puzzled to know what is the matter with my bees. I have only two stocks in frame-hives, one of which is a this year's swarm from the original, or parent-hive, and it was very strong in bees up till October, when I noticed that on fine days there was fighting going on at the hive-entrance, and in the evenings a great number of bees were found lying dead in front of the hive. Of course, this reduced the strength of the stock very much. They have, however, plenty of sealed stores, eight frames being apparently all full. Yesterday (December 19) was a fine, sunny day, and the bees were flying freely at both hives, but at the one referred to above fighting was again going on, and at the parent-hive also I watched them carrying out a number of dead bees. It would much oblige if you could tell me through B.B.J. the cause of this, and what I should do to prevent its continuance. I might say I am unable to lift up the centre frames to examine same, as after I hived the bees in the summer the foundation broke down in three of the frames owing, no doubt, to my not wireing same. (Name sent.)—A Constant Reader, Great Wakering, Essex, December 20.

Reply.—So far as we can gather from details given, the trouble seems to be an ordinary case of autumn robbing, but whether or not the bees of the parent-hive are the offenders it is not safe to say from a distance. The fact of dead bees being found at the entrance of parent-hive does not count for much, it being quite natural for old bees to die off this month, and be cast out by their younger co-workers.

[3987.] *Heather Blends of Honey.*—*Candy Making.* I send under separate cover a sample of comb-honey, and beg to ask: 1. Does it contain enough heather honey to allow me to sell it as "heather honey"? There is a large quantity of both "ling" and bell-heather within a mile and a half of my hives. Whilst at the recent Plymouth Show I purchased a jar of honey, which the vendor said was true "ling honey." But it does not taste or smell at all like the sample I am sending; that is why I should like to have your opinion. 2. Is the sample of candy enclosed of good quality? Name enclosed for reference.—Beeswax, Devon, December 19.

Reply.—1. Honey as sample could be sold as a good heather blend, though the predominant characteristics both in flavour and aroma are from "ling." There is very little, if any, from the "bell-heather" in it. 2. Your candy is not at all good; it is altogether too hard, and has been over-medicated. We should like to know what were the ingredients used in making, and what recipe has been followed, if you will kindly send a line on these items?

Notices to Correspondents & Inquirers.

P. B. (Derbyshire). — Shaded Hives. — Giving Artificial Pollen. — 1. No harm whatever will result from hives being shaded by trees during part of the day. In fact, many bee-keepers make a regular practice of shading their hives from hot sunshine in the busy honey-gathering season. 2. In districts where natural pollen is scarce in early spring it is of great advantage to give artificial pollen in the way proposed, in order to stimulate breeding.

Novice (Leicester).—Suspected Robbing in December. — 1. There is no cause for alarm when bees turn out in great numbers for an airing flight in December; and the slight signs of robbing observed would probably be caused by a few of the bees from the other hive trying to enter the first-named one. 2. The "grub cast out" is a larva of one of the numerous flies whose eggs are usually deposited among damp, decaying animal matter, such as dead bees and the debris which generally accumulates on hive floorboards if not removed in autumn.

R. G. E. (Knowle).—Buying Driven Bees. — The usual price for driven bees in autumn is from 3s. 6d. to 5s. per lot, or about 1s. 3d. per lb., if sold by weight. These prices are taken from our advertisement pages this year. We never hear of "driven" foreign or hybrid bees being charged at higher rates than natives. 2. It would be difficult to fix legal responsibility on the seller; besides, how could you prove that the queen was not with bees when despatched? She may be still in the hive. 3. No bees were enclosed in letter.